DOCUMENT RESUME

ED 457 802 HE 034 467

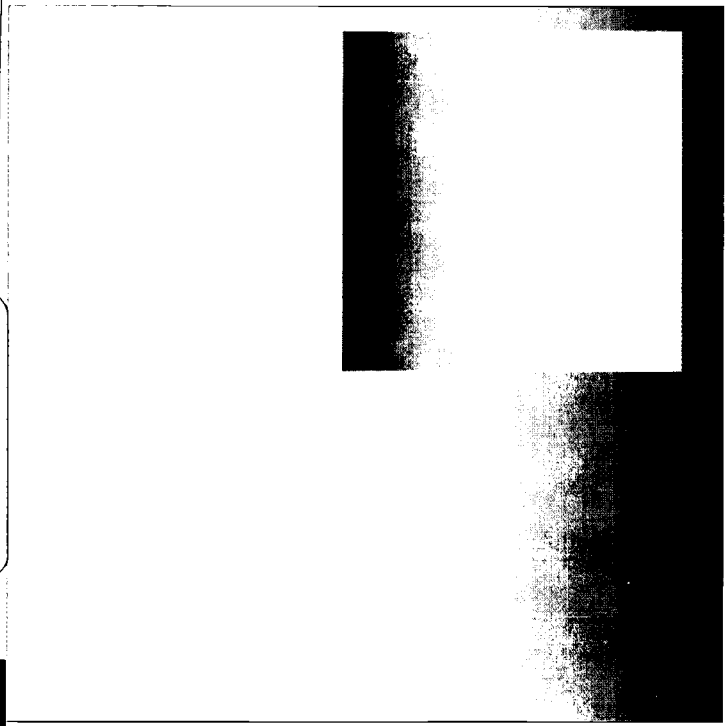
AUTHOR	Kelly, Melanie, Ed.
TITLE	Managing University Museums. Education and Skills.
INSTITUTION	Organisation for Economic Cooperation and Development, Paris (France).
ISBN	ISBN-92-64-19524-6
PUB DATE	2001-00-00
NOTE	187p.
AVAILABLE FROM	Organisation for Economic Cooperation and Development, 2, rue Andre-Pascal, 75775 Paris Cedex 16, France (paperback, $19; e-book, $15.20). Web site: http://www.SourceOECD.org.
PUB TYPE	Books (010) -- Collected Works - General (020)
EDRS PRICE	MF01/PC08 Plus Postage.
DESCRIPTORS	*Administration; *Educational Finance; Financial Support; Higher Education; *Museums

ABSTRACT

The papers in this collection focus on the role of university museums and their organization, management, governance, and finance. The chapters in section 1, "Roles and Challenges," are: (1) "University Museums in the 21st Century--Opening Address" (Lyndel King); (2) "The Dual Role of University Museums: Its Influence on Management" (Vanessa Mack); and (3) "The Challenge of the University Museum" (Dominick Verschelde). Section 2, "Raising Awareness and Working Together" contains: (4) "Collections in the United Kingdom" (Kate Arnold-Foster and Sophia Mirchandani); (5) "The Cinderella Collections: An Australian Fairy Story" (Don Yerbury); (6) "Managing the Visibility of University Museum Collections" (Peter Stanbury); (7) "A Regional System of University Museums" (Fausto Pugnaloni); and (8) "Uniting Forces: The European Network and National Collaborative Projects" (Steven W. G. de Clerq). Section 3, "Parallels and Partnership with Private Business," contains: (9) "Strategic Planning and Action for Success in a University Museum of Natural History" (Peter B. Tirrell); (10) "A Public-oriented and Educational Museum" (Peter de Haan); and (11) "Funding and Public Access through Partnership with Business" (Ian Carradice). The final section, "New Projects," contains: (12) "New University Museums: An Opportunity for a New Strategic Vision. The Brooking Collection, University of Greenwich" (Sue Millar); (13) "Public Understanding of Science: Universities and Science Centres" (Hannu S. Salmi); (14) "Funding and Museum Ownership" (Kati Heinamies); (15) "The Patras University Science and Technology Museum: Fulfilling the University Museum's Dual Role" (Penelope Theologi-Gouti); (16) "A New Museum of Electrical Technology in Pavia: A Public Museum in a University Campus" (Antonio Savini); (17) "New Horizons for the Crafts Study Centre Collection and Archive" (Barley Roscoe); and (18) "Conclusions" (Melanie Kelly). (Each chapter contains references.) (SLD)

Managing University Museums

EDUCATION AND SKILLS



OECD

Managing University Museums

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Pursuant to Article 1 of the Convention signed in Paris on 14th December 1960, and which came into force on 30th September 1961, the Organisation for Economic Co-operation and Development (OECD) shall promote policies designed:

- to achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries, while maintaining financial stability, and thus to contribute to the development of the world economy;
- to contribute to sound economic expansion in Member as well as non-member countries in the process of economic development; and
- to contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations.

The original Member countries of the OECD are Austria, Belgium, Canada, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The following countries became Members subsequently through accession at the dates indicated hereafter: Japan (28th April 1964), Finland (28th January 1969), Australia (7th June 1971), New Zealand (29th May 1973), Mexico (18th May 1994), the Czech Republic (21st December 1995), Hungary (7th May 1996), Poland (22nd November 1996), Korea (12th December 1996) and the Slovak Republic (14th December 2000). The Commission of the European Communities takes part in the work of the OECD (Article 13 of the OECD Convention).

The Programme on Institutional Management in Higher Education (IMHE) started in 1969 as an activity of the OECD's newly established Centre for Educational Research and Innovation (CERI). In November 1972, the OECD Council decided that the Programme would operate as an independent decentralised project and authorised the Secretary-General to administer it. Responsibility for its supervision was assigned to a Directing Group of representatives of governments and institutions participating in the Programme. Since 1972, the Council has periodically extended this arrangement; the latest renewal now expires on 31st December 2001.

The main objectives of the Programme are as follows:

- to promote, through research, training and information exchange, greater professionalism in the management of institutions of higher education; and
- to facilitate a wider dissemination of practical management methods and approaches.

FOREWORD

University museums are powerful resource centres for higher education institutions wishing to maximise the impact of their teaching and research and to reach new audiences in their region or beyond. They therefore have a unique, bridging role in the dissemination of knowledge and of the understanding of science – besides their primary roles as keepers of collections in various fields.

University museums are, however, also facing challenges, many of which are connected with constraints that are affecting most other sectors of higher education. Their staff and leaders therefore, often with good reason, feel concerned that they are not prioritised as highly as they would have wished. This particularly regards financial resources and attention of university management to their needs – in spite of innovative ways of communicating with new audiences and in spite of well preserved and well presented collections. University museums therefore need to be well aware of their different roles and of the challenges they face. They also must work together, develop partnerships and new projects.

One important element in the mission of the OECD Programme on Institutional Management in Higher Education (IMHE) is to assist institutions to meet their organisational objectives effectively. Therefore, the IMHE Directing Group decided to devote one of its seminars – in the series of "What works - Best practice" events – to the management of university museums.

This volume is a selection of the Paris seminar papers organized according to the main themes addressed. It is published on the responsibility of the Secretary-General of the OECD.

TABLE OF CONTENTS

Introduction
by Melanie Kelly, England 7

SECTION 1. ROLES AND CHALLENGES

1.1. University Museums in the 21st Century – Opening Address
by Lyndel King, United States 19

1.2. The Dual Role of University Museums: Its Influence on Management
by Vanessa Mack, Australia 29

1.3. The Challenge of the University Museum
by Dominick Verschelde, Belgium 37

SECTION 2. RAISING AWARENESS AND WORKING TOGETHER

2.1. Collections in the United Kingdom
by Kate Arnold-Forster and Sophia Mirchandani, England 47

2.2. The Cinderella Collections: An Australian Fairy Story
by Di Yerbury, Australia 55

2.3. Managing the Visibility of University Museum Collections
by Peter Stanbury, Australia 69

2.4. A Regional System of University Museums
by Fausto Pugnaloni, Italy 79

2.5. Uniting Forces: The European Network and National Collaborative Projects
by Steven W.G. de Clercq, Netherlands 85

SECTION 3. PARALLELS AND PARTNERSHIP WITH PRIVATE BUSINESS

3.1. Strategic Planning and Action for Success in a University Museum of Natural History
by Peter B. Tirrell, United States 105

3.2. A Public-oriented and Educational Museum
by Peter de Haan, Netherlands 121

3.3. Funding and Public Access through Partnership with Business
by Ian Carradice, Scotland 133

SECTION 4. NEW PROJECTS

4.1. New University Museums: An Opportunity for a New Strategic Vision The Brooking Collection, University of Greenwich
by Sue Millar, England 143

4.2. Public Understanding of Science: Universities and Science Centres
by Hannu S. Salmi, Finland 151

4.3. Funding and Museum Ownership
by Kati Heinämies, Finland 163

4.4. The Patras University Science and Technology Museum: Fulfilling the University Museum's Dual Role
by Penelope Theologi-Gouti, Greece 169

4.5. A New Museum of Electrical Technology in Pavia: A Public Museum in a University Campus
by Antonio Savini, Italy 179

4.6. New Horizons for the Crafts Study Centre Collection and Archive
by Barley Roscoe, England 187

Conclusions
by Melanie Kelly, England 197

INTRODUCTION

by

Melanie Kelly,[1] England

Abstract

The IMHE seminar on managing university museums provided a forum for discussions on the role of university museums, their relationships with their universities and society in general, their collaborative work, their financing, and the implications of widening public access. Some museums are coming under close scrutiny as part of resource and space reviews conducted by their universities. As research and teaching needs change, a university museum may find its usefulness as an academic resource has diminished. To survive, the museum may accentuate its position as a showcase for the university's achievements, reinforcing the image of the university as a place of culture and learning. Attracting a diverse audience becomes part of its public relations function. The university museum must face up to a challenging dual role, protecting the values embodied in its position within an institution of higher learning whilst at the same time providing the stimulating environment demanded by the general public. This has a direct impact upon management decision-making particularly in terms of defining the museum's mission, implementing a business plan and conducting fundraising.

The IMHE seminar on the management of university museums

In September 2000 the *Institut finlandais* in Paris hosted a two-day international seminar on university museums organised by the Finnish Cultural Centre and

1. The author wishes to thank the following for the support and guidance they gave her as she edited this book: Jacqueline Smith and Jan Karlsson of the IMHE Secretariat; Ian Jones, Chadwick Jones Associates; Richard Mawditt, Gordon Brown and Vhyna Ortega, The International Centre for Higher Education Management; Andrew Kelly.

the Programme on Institutional Management in Higher Education (IMHE).[2] The seminar attracted over 60 delegates from 17 countries and served to encourage the exchange of information, ideas and good practice across national boundaries, laying the foundation for greater collaboration internationally. It provided a forum for discussions on the management of university museums, their relationships with their universities and society in general, their collaborative work, their financing, and the implications of widening public access.

Delegates came from a range of different institutions representing different academic disciplines and with different museological traditions, but all shared a commitment to, and enthusiasm for, university museums. Although this publication does not constitute a complete set of proceedings of the seminar, all the papers published here were written by seminar delegates and the topics covered are representative of the issues raised. A recurrent theme that runs through the papers is that the university museum must face up to a challenging dual role. It must protect the scholarly values appropriate to its position within an institution of higher learning whilst at the same time providing the stimulating environment demanded by an increasingly sophisticated and diverse audience. This has to be achieved with limited funding and has a direct impact upon management decision making.

The papers in the first section look at the particular challenges faced by the university museum today. Drawing upon her knowledge of university art museums in the US, Lyndel King shows how the shift away from curatorship to satisfying the needs of audiences has led to a reassessment of the university museum's mission. Vanessa Mack looks at the implications of the changing role of university museums and how this necessitates redefining their management style. In his paper, Dominick Verschelde shares his experience of some of the day-to-day problems faced by those working in university museums, from labelling specimens to dealing with inheritances.

Section two gives examples of ways of raising awareness and encouraging people to work together. In a joint paper, Kate Arnold-Forster and Sophia Mirchandani write of the survey of higher education museums, galleries and collections in the United Kingdom. Di Yerbury outlines the lessons to be learnt from the Australian review of university collections. Peter Stanbury gives

2. For convenience, throughout this publication the term "university" is used in reference to any degree granting higher education institution.

practical advice on helping university curators to effectively discharge their responsibilities through the use of networking and partnerships. Fausto Pugnaloni writes of an integrated national and regional network of university museums in Italy. Steven de Clercq argues that those working in university museums should unite forces to more effectively manage and protect the academic heritage which has been entrusted to them.

Section three looks at similarities and links between university museums and private business. In their papers, Peter B. Tirrell and Peter de Haan show how the principles of strategic planning can be adapted and used by university museum managers. Ian Carradice writes of a public-private partnership between a university and a commercial company working to establish a university museum in Scotland.

The final section gives some examples of new projects. Sue Millar uses the case of the Brooking Collection at Greenwich to address the issue of how to develop new agendas for university museums, Hannu Salmi writes of the development of science centres and their promotion of the public understanding of science. Kati Heinämies looks at the implications of funding and museum ownership in relation to the University of Helsinki's plans to open a new museum on the history and development of Finnish scholarship. Penelope Theologi-Gouti and Antonio Savini both describe the development of new science and technology museums in, respectively, Greece and Italy. In the final paper Barley Roscoe writes of the aspirations for a crafts collection which has recently moved from one higher education institution to another.

This introductory paper provides an overview of the main themes covered in the book, drawing on comments made in the presentations and group discussions at the Paris seminar.

The university collections

University museums have generally evolved from the commemorative, ceremonial, decorative and teaching collections gathered from various sources during their universities' history.[3] In some instances external benefactors have

3. For an insight into the origins of university museums and collections see Hamilton, J. (1995), "The role of the university curator in the 1990s", Museum Management and Curatorship, Vol. 14, No. 1, pp. 73-79.

donated their private collections to a university and these have been developed through a continuing series of gifts, loans and bequests. Other museums have their roots in the collections of learned societies, which have been taken up in a mutually beneficial arrangement that provides security for the collections and kudos for the university. Old universities are continuing to collect, and the younger universities are making collections of their own, integrating them with their teaching needs and, particularly in the case of art collections, developing them as a symbol of their entry into the establishment.

University collections can be of national and international significance. However, some are becoming a burden to the old universities, a drain on resources, space and time. Alongside prestigious collections housed in fine museum buildings, there are countless random assortments of artefacts assembled by long forgotten professors and now jumbled together in cluttered display cabinets. History is repeating itself as the new universities, emulating the old, likewise often collect unwittingly, never properly defining what and why they are collecting. In twenty years time these new collections could also have become burdens.

Higher education provision is changing. Universities are becoming more accountable to their various stakeholders. They can no longer rely on the once accepted wisdom that higher education is "a good thing" and must find ways of evaluating their operations, justifying the investments needed to sustain them and proving that they have the management skill to extract maximum value from the money they receive. If higher education managers are reviewing all aspects of their provision then university museums and their collections will necessarily be part of this re-assessment. Are they part of the university's core business, an ancillary service, a frill or a dead weight?

University museums and research

One of the distinguishing features of a university museum is the pre-eminence of scholarship. This scholarship is evident both in the museum's own curatorial research into its collections, and its close involvement with the teaching and research activities of the university. Many university museums form an integral part of academic programmes. They can authenticate theoretical teaching by providing original artefacts for practical study that enrich the learning experience. Having been founded on the principle of academic freedom, the university museum can be a place of innovative thinking. It has the potential for

generating more penetrating and more controversial ideas and insights than can the rest of the museum sector.

However, as research and teaching needs change, a university collection or museum may no longer have the academic value it once had. Many university museums are small and department based with restricted access and the most basic of storage facilities. Having been assembled on an ad hoc basis, many have never been properly documented or managed. They may be cared for on a volunteer basis by a range of university employees (academics, technicians, librarians) who have to combine this work with their other duties. In such circumstances the museum may have no clear identity within the university or means of reporting officially to senior management. For this reason it is particularly vulnerable when university administrators are looking to free up space and make cuts in non-core areas.

Neglected objects can be revitalised if museum staff have the knowledge, experience and enthusiasm to encourage academics to re-assess the teaching and research value of a collection, to improve its display and, perhaps, to actively develop it. Imaginative leaps can be made across the academic disciplines, with archaeology collections being used by computer science students, fine art objects studied by trainee doctors. Networking amongst those working within university museums provides an opportunity to focus attention and discussion, promote unified defensive action and make synergistic alliances. Objects from small collections might be integrated with others to form a more cohesive and larger whole and, as an alternative, rationalisation through merger, transfer or loan is always preferable to unthinking destruction or abandonment. However, if no justification can be made for the continuing existence of a collection or individual objects held within it then the only reasonable option may be disposal. This should be carried out in accordance with a written policy that meets recognised museological standards, and professionals trained in collection assessment should make such decisions.

The university museum's public role

Alongside its scholarship, the university museum is also distinguished by the wide range of audiences it can attract. As well as welcoming students and academics, many university museums have long provided opportunities for the general public, of all ages and walks of life, to use the collections. This provision forms part of a museum's civic responsibility to help produce well-

informed citizens as well as specialist scholars. Traditionally the university museum's public education work was defined by the collections and the research that surrounded them. Now there are signs that the focus has subtly shifted. Some university museums which are open to the public are no longer primarily driven by their curatorship but are adopting a more market orientated approach, finding out what people want to learn and presenting it to them in the way they want to learn it.

The shift in focus is a reflection of the need to modify the museum's role in order to justify some level of support from its university. If the museum is losing its relevance as an internal academic resource, it might be able to accentuate its contribution to its university's public relations initiatives. Used as a public showcase, the university museum can reinforce the message that universities are places of culture and learning. Through its exhibitions, visitor services, family activities and educational programmes (both formal and informal) a museum can be an effective means by which the university can communicate with the wider world. It can provide a comfortable and stimulating place where different generations, different communities, and different levels of knowledge can make connections.

The shift is also indicative of the need to find alternative funding sources if the university is not able or willing to continue as the sole financial provider. Many external bodies wish to see evidence of a diverse and equitable access policy before considering a funding application. Museums generally are realising that they cannot hide behind their scholarship but must actively encourage people to use their collections for education and enjoyment.

The university museum has to make decisions about who are and who should be its users. In this it does not pay to look only at the obvious for visitors and researchers can arrive from unexpected places. People come to a museum for different reasons: to see a unique collection, to seek advice on the identification of specimens, to get help on school projects or in setting pub quizzes, to take the weight off their feet or to escape the rain. The museum has to understand these users' needs. However, public expectations of what a museum can provide may not only be unrealistic but also contradictory. The museum has to understand what is possible and use this to provide a focused direction for its strategic plans.

Managing change by working strategically

It is difficult to generalise about existing university museum management structures, as the range of organisations is so diverse. Managers of small museums may have no official voice within the university, no decision-making powers and no money. Larger museums usually have a clearer institutional identity with day-to-day responsibility held by an individual director reporting to a variety of boards and committees. However, even in relatively high profile museums, staff can become isolated. Existing in an uncomfortable hybrid state, they seem to lack common ground with erstwhile colleagues in both the university and the museum sector.

To cope with the changing role of the university museum, some believe that a new style of manager is needed, one who is an energetic communicator, trained in museum management rather than the specialisms of an academic discipline. There is a significant difference between a museum led by a research curator, an expert in their field of scholarship but generally not attuned to the front of house needs, and one led by a more proactive professional. Some university museums, like others in the museum sector, are looking to develop an enterprising, customer-focused approach. The nature of collaboration is also changing as project-based initiatives driven by outsiders and with unclear long term benefits are being replaced by strategic alliances which have a greater potential for sustainability.

An effective strategy, particularly one requiring external funding, needs to incorporate a business plan that presents information in a format that is understood by a funding source. For a plan to be accepted by a potential partner or funder it needs to be pithy, punchy, make connections to the "real" world, offer something new and something better, and show that by giving their support people will be making a difference.

The business plan is a political document. It is important that it should be endorsed by the local community and by powerful volunteers who can lobby on the museum's behalf both within the university and elsewhere. University administrators are far less willing to listen to "the hired help" than they are to influential outsiders. "Vocal" supporters must be actively enlisted to persuade the unconverted that a museum is an invaluable enhancement to an educational institution and to the community in which it is located. To convince others to give their support requires passion and a clear vision.

Fundraising

Fundraising is a key management technique. It should be driven by a strategic agenda derived from real needs identified by internal review, and from data gathered from national surveys or networking groups. The museum manager should be looking for intelligent solutions to specific funding problems.

When it comes to donating artefacts, a university museum may seem like a safe pair of hands, providing free warehousing in a prestigious environment. Potential donors may be less keen to give such a museum money. They may fear it would be absorbed by the university's other activities and would therefore not generate something tangible for which they could take partial credit (it would be hard to give any reassurance if the museum had no ring-fenced budget). It is generally easier to obtain funds for strategic alliances and capital projects than for annual running costs. It is also thought by some to be considerably easier to attract money for works of art than for obsolete scientific instruments or natural history collections. More imaginative spending can often be made from endowment funds, provided they have been built up to a sufficient level.

The establishment, maintenance and development of relationships with resource providers (each of whom is likely to set different criteria) may incur considerable speculative expenditure and energy. University museum managers usually need to obtain permission from their university before they can begin to woo potential funders to ensure they do not conflict with their university's overall fundraising strategy. It is at such times that the influence of external supporters can help push the needs of the museum higher up the university's fundraising agenda. For those working outside the US the sums of money that have been successfully raised there from the private sector for university museums are beyond their wildest dreams. People are not necessarily kinder in the US than elsewhere but benefit from a tradition of public institutions being supported by rich patrons and a tax system that encourages public-spirited giving. These funds still have to be actively pursued and the methods used, if not the volume generated, could be applicable in other countries.

To avoid a university cutting back its own contribution in the light of external income being received, the museum manager needs to convince the university of the value added by the additional income. These are *matching* sums, not *substitute* ones. The relationship between the museum, a private donor and the

university needs to be framed as a public-private partnership with the university continuing to have a responsibility to do its share.

Conclusion

The Paris seminar showed how people working within university museums are finding solutions to their difficulties through experimentation, internal review, surveys, networking, advocacy, collaborative projects, business planning, and strategic thinking. They revealed that although university museums would certainly welcome greater understanding, recognition and money, they are neither complacently waiting for others to come to their rescue nor resigned to an inevitable demise. Many are accepting the challenges as opportunities. They are already striving to find imaginative new visions and more distinctive profiling for their museums using all available resources. By making their own significant steps towards securing a more positive future, they hope to show their universities, relevant external bodies and, perhaps more importantly, their colleagues working in other university museums what can be achieved. Having demonstrated their potential and articulated their responses to the changing environment in which they work, they are better placed to petition for additional support. As one speaker remarked, the key to successful fund and friend raising is always to stretch yourself and always to have something worth selling. It is hoped that the papers published here will contribute to the growing awareness of the value of university museums and the staff who run them.

SECTION 1
ROLES AND CHALLENGES

1. 1. UNIVERSITY MUSEUMS IN THE 21ST CENTURY
Opening Address
by
Lyndel King, United States

Abstract

University museums have been a part of higher education in the United States since the early decades of the 19th century and before. Nearly every university of any size, whether public or private, has a museum on campus. University museums are increasingly called upon to serve as a link between the campus and the community and to play an important role in the public service and outreach mission of the university. At the same time, they must be part of the central academic mission of the institution and participate fully in the education of students. The dual role has to be acknowledged and appreciated by the university and by the community. However, it brings pressures and expectations. University museums are expected to attract large numbers of students as well as members of the community and are encouraged to be entrepreneurial in finding new sources of financial support. At the same time, the faculty expects the museum to provide a high level of support for teaching and research and to maintain collections. How college and university museums respond to these pressures and define themselves will be major challenges in the next decades.

Introduction

University museums have been a part of higher education in the United States since the 19th century. Nearly every university of any size, whether public or private, has a museum on campus. The majority of these museums are art museums. The art museums have evolved out of a populist notion that if the benefits of education must be made available to all citizens, an opportunity to

experience art is part of education and therefore it is the responsibility of the university to offer and support that opportunity. Science and natural history museums on campuses have had a somewhat different history. They usually evolved out of research collections.

The shift from collections to audience in American museums

Collecting - the amassing of objects - is the thread that holds museums together. The main purpose of museums for decades, perhaps centuries, was to contain, categorise, and keep safe objects that were considered the artistic, cultural and natural treasures of the world; to use these collections to search out or expand knowledge; and, somewhat secondarily, to distribute the knowledge that was contained in or implied by these objects. Traditionally it was the existence of collections that distinguished museums from other kinds of educational institutions, and this is still the case. However, today, collections alone – even collections in a room open for public viewing – do not make a museum.

The traditional definition of a museum is that it is an institution that holds collections, preserves them for the future, and interprets them for their audiences. In the 19th century museums began to focus upon the interpretative part of their mission: the creation and distribution of knowledge. Art museums helped create knowledge by sponsoring archaeological expeditions that also enriched their collections. Museums began to adjust their opening hours – aided by the invention of gas lamps – to allow more than the idle rich to visit them. And, museums began to adjust the way they showed their collections. Instead of hanging everything by size, art museums began to actually arrange their collections by geography or chronology. They started to hang similar things together – to use the way they arranged the objects as an educational tool rather than simply trying to show as much as they could in the space they had.

In the last decade or so, there has also been a change in the way American museums view themselves and in what they see as their main responsibilities. The idea that museums existed first of all to protect their collections and create knowledge about them – the curatorial point of view – has been dominant for most of the life of museums but there has been a strong shift in the United States towards audiences. The following statements are illustrative of how most museums have defined their missions over the past 25 years. They all come from art or history museums but are similar to mission statements of other kinds of museum in the United States:

- "The purpose of the museum is to collect, preserve, exhibit, and interpret the visual arts through exhibitions, research, and publications."

- "The mission of the museum is to support the collecting, preservation, research, exhibition, and publication of the arts of America."

Here is a mission statement written in 1941: "The mission of the museum is to preserve for the future the beautiful things of the past while providing education and enjoyment for the public."

Contrast the above with these, taken from American art museums today. They are all actual statements and some are from university museums:

- " [The museum] is a visual arts institution, essentially educational and aesthetic in nature, with the purpose of enhancing the appreciation and understanding of the visual arts."

- "The mission of the museum is to educate the broadest possible audience by collecting, preserving, displaying, and interpreting important works of art."

- "[The] museum advances public knowledge and appreciation of art, architecture, and design and enhances the cultural experiences of the residents and visitors to the state."

- "[The museum] has taken a highly active stance to assure that we make a direct connection with our visitors through our exhibitions, interpretative programs and educational efforts. Our mission – to express through art the unfolding value of the American multicultural experience – is an affirmation of the museum's commitment to serve broad and diverse audiences."

The mission statement of a museum with a major encyclopaedic collection is the following: "[The museum] is dedicated to national leadership in bringing people together to discover, enjoy, and understand the world's diverse artistic heritage."

Here is ours, rewritten in 1994: "The Frederick R. Weisman Art Museum at the University of Minnesota is a teaching museum that links the educational mission of the University and the cultural life of Minnesota in a dynamic and congenial place, for the discovery, understanding, and enjoyment of art in all its facets."

These statements were collected by a museum studies class a few years ago. The class project discovered that most museums they surveyed – art, history and science – had rewritten their mission statements since the mid-1980s. Not only did museums update language and make their statements more informal; there was a significant shift in the way they stated their missions. While older statements said that the museum's mission is to collect and preserve, the more recent statements talk about education first, or the audience's experience. If they mention a collection at all, it is simply as a means to the educational end, often mentioned along with a number of other means. Research was almost never mentioned as a part of the core mission of the museum in the rewritten statements while it was a key part of the older ones. Steven Weil, who was deputy director of the Hirschhorn Museum in Washington, D.C., for many years and who teaches and publishes widely about museums, has described this shift as "from being about something to being for someone."[1]

Museums in the United States have also moved from a sales to a marketing approach. We used to try to get people to buy the products we offered – the exhibitions, lectures, tours, etc., that we had decided were good for them. We sold what our experts thought they should want to buy. Now, we ask our audiences what they want to buy and try to supply it to them – an approach that emphasises the ideas of marketing.

We have moved away from the idea that curatorial research determines what we offer to the idea that we need to try to figure out what our audiences want to know. Further, we must figure out individual learning styles so we can provide what they want in the way they can most easily learn it. Consultants and companies that will survey our audiences for us abound in the United States, and some funding sources insist, as a condition of qualification for a grant, that

1. Stephen E. Weil, "From Being *about* Something to Being *for* Somebody: The Ongoing Transformation of the American Museum", *Daedalus* (Journal of the American Academy of Arts and Sciences), Summer 1999, America's Museums, Vol. 128, No. 3, of the Proceedings of the American Academy of Arts and Sciences.

we provide an audience survey or an evaluation. They want to know what our audience thinks about our products and what they want us to be doing.

This does not require dumbing down at all. This does not mean the end of serious scholarly research in museums. Serious research and knowledge must underlie everything a museum presents to its audiences. However, it does mean that applied research – research that leads to temporary exhibitions or a new approach in interpreting the collection or other programmes for the public – is ascendant.

Changing sources of funding

At meetings of university museum directors in the past, we used to congratulate ourselves because we were the last place in the museum world where pure scholarship could be preserved – the last kind of museum that had the luxury to research the collection and to present exhibitions that did not have to be popular because we did not depend on the "gate". We were not attendance driven because we were part of an academic institution that funded us and protected us and, basically, did not pay much attention to how many people came through our doors.

We defined our difference from other museums in terms of being able to take more risks with our exhibitions, to present unpopular ideas or more esoteric points of view because we were part of an academy that supported open discussion of all ideas. Academic freedom was the backbone of our universities and their museums. That is changing in the United States. University museums have been thrown into the marketplace and we must compete for funding. We are becoming less university museums and more museums at universities. This is not necessarily bad, but it does provide challenges as we try to define what makes museums at universities different from other kinds of museums in the next decades.

University museums in the United States cannot depend on one stable source of funding any more. I looked at the funding sources for 35 university art museums. These statistics are only for university art museums because that is the area of my expertise. They are perhaps more valid in the United States than elsewhere, particularly in Europe, because art museums dominate among university museums in the United States, while natural history and science museums are more numerous in European universities. None of these

35 museums is 100% funded by the university of which it is a part. On average, the university provides only 41% of annual expenses. The lowest amount provided by a university for a museum in this group is 5%. In a survey conducted in 1986, the average percentage that the university funded was 76%. About 18% of the museums received 100% of their budget from their universities. These two surveys did not include exactly the same museums, so these numbers probably would not qualify as scientifically significant. However, there are enough overlaps in the museums surveyed to give the comparisons credibility. Of course, there are still those museums in the United States that are funded entirely by their university or college. In the art museum sector these are usually galleries with limited collections. They are usually at small, well-funded liberal arts colleges. In the large state universities, and the larger private colleges, I do not know of any case where the museum is totally funded by university allocations.

Looking at the 59% not provided by university allocations, on average, private support - that is memberships, private foundation gifts, and individual gifts - provides 21% of financial support. Earned income provides 13%. Endowment or invested funds held in trust for the museum provides 19%. The rest, about 6%, comes from federal or state government grants or a variety of other sources. At my museum, about 25-30% of annual funding is earned income, which includes the museum store, fees from travelling exhibitions, and the rental of space for events, receptions and weddings, bar mitzvahs, and senior proms. In addition, it is important to note that the Weisman Art Museum was built entirely with private funds. It is part of the university, but no university funds or government funds went into the construction of the facility. It was a gift from the community to the university.

Money available from private foundations in America today is used for attracting diverse audiences and new audiences to museums. It is not meant for buying art to add to the collection or for research that may be published in limited circulation journals or catalogues. Corporate support often requires that the museum prove what bang it can provide for the buck – and the bang for supporting research or esoteric exhibitions is usually not enough. More and more corporate dollars are coming from the marketing budget rather than from a corporate foundation. Some corporations hire public relations firms to pre-screen applications and rate the museums on their potential for securing large audiences and visibility for the corporation.

Changing presentation

At the same time as funding sources have changed, exhibitions and museum operations generally have got more expensive. In art museums, high values for works of art have increased insurance costs. And audience expectations have been honed by the slick productions they see on television, in the movies, on billboards and everywhere around them. Audiences want to see important exhibitions and they expect high production values. They expect to be invited with jazzy looking invitations, and when they get to the museum they expect acoustical guides and high quality picture books. Visitors expect amenities. They want cafés and shopping opportunities. I saw a billboard advertising a science museum in our city and it said, "Which provides more stimulation at the science museum - the exhibits or the espresso bar?" Indeed!

Museums across the United States, including university museums, are changing what they present. Our visitors tell us they want to "find themselves" in our museums. They want to see their faces and their stories in our exhibits. No longer are famous dead white men the focus of exhibits in our history museums. History museums in the south, for example, are revising their exhibits to focus on the slave economy and on the daily life of a slave. The emphasis on gender and ethnic studies has influenced American museums. We are looking carefully at our exhibitions to make sure that every point of view is well represented. The history of a 19th century American Indian uprising in Minnesota, for example, is presented a lot differently now than it was even ten years ago.

Joel Bloom, retired director of the Franklin Institute Science Museum, said in a speech a few years ago that he received a phone call from a trustee immediately after the Chernobyl nuclear disaster. The trustee was wondering what the museum was doing to prevent such an incident in the United States. Dr. Bloom could at that time only answer "not much", but believes that today his answer would be very different. Science museums see their responsibility to educate as not just talking about the methods and technology of science, not just celebrating its accomplishments, but to raise the ethical and moral dilemmas that accompany much of science today.

Context was a word not heard in everyday art museum curatorial conversation perhaps twenty years ago. It is now. Art museums do not talk so often about how to recognise different styles as about how this object was made, why was it made and who made it. They ask questions about how this object got to where it

is today – was it looted by the Nazis, and should we make that story equivalent to the other stories that are contained within the object?

The student and faculty audience

So, where does this leave museums that are part of a university? I sometimes feel that we are on a tightrope. About half of the visitors at my museum are from the university, the rest are from the wider community. We must attract a large number of visitors from the community because they contribute to our earned income, and they influence the private foundations and corporations we are asking to support us. We must have a café, and a museum store, and attractive displays, and family days, and programmes for elementary school children in order to win the funding we need to fill in the half or more of our budget that the university does not provide.

At the same time, I still believe we have a special responsibility to the university of which we are part. We must pay attention to our students and our faculty. But, even there we find conflicting interests. Students say they want us to be more "with it". They want us to show more new-media exhibits. They want buttons to push and a quick succession of moving images, the kind they see on music videos, while the faculty still think their research attributing obscure Renaissance drawings will be fascinating to everyone.

What about our student audiences? Should we only give them what they want or already know about, or are we obliged to offer them a range of experiences? How do we get them into the museum? Students are often our hardest audiences. They have a lot of demands on their time. At our university, almost all students work. They have lots of options for entertainment. We have developed some successful strategies for bringing students into the museum. Engineering students were required to attend a lecture series we organised, with mechanical engineering and materials science, on the concept of elegance in the arts and sciences. Writing students must write about a work of art on display, and we offer cash prizes for the best essays or poems of the year. And, we do offer dances. Funk at the Fred, our welcome week dance, usually attracts about 2 000 first-year students. The Dr. Date and the Love Nurses Mixer that we co-sponsor with our campus radio station and newspaper attracts about the same number. We do not think we are going to convert any art history majors at these events, but we do think that we may convince a few students that it is OK to go

into an art museum, that museums are not intimidating, and they might want to come back some time later. And, they do.

But what about the small esoteric exhibition based on our own curator's or a professor's research, for which there is absolutely no hope of getting outside funding or large audience? I think we should be presenting those exhibitions, but in truth they are getting more and more crowded out by the fundable projects. I worry about how we can continue to present the difficult ideas that we find perfectly acceptable in an academic setting, based on open discourse, in ways that will not alienate our community audiences.

It has been a long time since I have been able to say that it does not matter how popular our exhibitions are, that they can be based solely on the importance of the scholarship, but I still believe passionately in university museums. On a college campus, a museum can be a perfect setting for making art, or science, or history matter to young people. The museum can provide a workshop, a place where students can hone their research and creative talents and skills. It can be a place where students develop a life-long passion that will enrich and inform everything else they do.

I believe the new emphasis on audience in the United States places a lot of stresses on us. At the same time, it places us in the centre of the action. Where better but at a university to find the new audiences we hear so much about? We must be clever and diligent to engage them in the face of so much competition for their time, but we have something to offer. We provide an experience with the real, with the authentic, that balances all the virtual experiences our students have elsewhere.

We can use our students to help us provide programmes for our community audiences and both sides love the experience. Our university's architecture students acted as mentors in workshops about architecture and design we presented for high school students. University theatre students present public performances based on exhibitions. For example, students researched and presented a two-person show based on themes in an exhibition of African-American artist Jacob Lawrence's prints. Their performance at the museum won them fellowships at our Guthrie Theatre the next year and our community audiences wept at the performances. Students from our music school play for our family days and art students direct children's art-making activities. Graduate students in art history offer courses at the museum for senior citizens.

And students from everywhere helped create our museum art car which we drove in the football homecoming day parade.

Conclusion

When I first began to work in a university museum more than twenty years ago, the director had a beautiful tea set in her office, and she explained that every afternoon at a particular time, the curatorial staff would stop and drink tea and engage in genteel conversation. I do not remember how often we actually did that then, but I can tell you that I do not even own a tea set!

We are working harder than ever. Sometimes it seems that we are redefining ourselves every moment. How can we continue to protect our core values? How can we encourage real scholarship and contribute to the academic enterprise and educate students – and still raise half our budget every year? And I do not think we have the option of only doing half as much. We must be more creative, more energetic, and more enterprising. I think we must abandon the ivory tower, if there ever really was one. My university museum is stimulating and challenging and exhausting. And I love it. For American university museums, I think there is no turning back, and I for one am glad.

1.2. THE DUAL ROLE OF UNIVERSITY MUSEUMS: ITS INFLUENCE ON MANAGEMENT

by

Vanessa Mack, Australia

Abstract

University museums were generally founded as an adjunct to the teaching and research interests of their university. While many have retained elements of this role, in many other cases it would be difficult to argue that the museum is central to the core business of the university in teaching and research. The role of the university museum is changing, partly because of fundamental changes to the way research is now conducted, and the museum must create for itself an enhanced or new role as a public showcase of the university. This serves to attract new students, introduce the local communities to the university, and present the university as a place of culture. This has implications for the management of university museums, which should now be managed by full time professional museum workers rather than by part time or retired academics whose main interest is still the academic model of the museum.

Introduction

It is generally true that the university museum would like to see itself as a centre of research and academic teaching, and thus an essential component of the university's core business. While undoubtedly it has a role in research and teaching, which in certain fields is often very strongly articulated, the thrust of this paper is to argue that overall its public role is becoming more important. This is now its area of growth, and the future of the university museum lies in it being a publicly accessible institution, serving not only the university public, but with a strong emphasis on serving the wider community. The university museum thus becomes an outward face of the university and part of the wider

museum scene, operating in a form of competitive co-operation with the other museums in the city.

Whilst I can only speak with confidence of the situation in Australia, it seems to me that in both university museums and in the museum community at large, the role of the museum in research is changing. While this is particularly true in the area of natural history, it is also true in other disciplines which originated in material culture based studies.

Museums and research

Many natural history and science museums are experiencing a profound change in their focus. Where once they regarded themselves primarily as research institutions, which displayed certain lesser specimens in relatively unchanging galleries, they are now forced to compete as an entertainment venue. Exhibitions are now the prime focus, and the scientific side of collecting and publishing is given less prominence. State funded museums are facing pressure from the funding source to make their primary focus the presentation of natural history, public education and entertainment. The state sees research as an area of responsibility for the universities or industry. This takes little account of the fact that the type of research for which museums are best fitted is different in nature from much that is currently done or taught at universities.

In Australia this has led many natural history museums to redefine their research role. At the same time, natural history museums and collections in universities have lost a lot, if not all, of their role in the current research in their disciplines. Changes in the curriculum and in research interests of academics in the biological and geological sciences have reduced the relevance of specimen-based collections for university teaching and researchers in the faculty do not actively use them. In the last five years geological collections in at least two of the major research universities in Australia have been declared redundant, and have been disposed of. Departments which do require the odd specimen for teaching, either borrow from the museum or establish small specimen collections, of essentially disposable items, for use in demonstration and teaching.

A similar change from specimen-based research and material culture based teaching to more theoretical approaches to the subject and a wider definition of "anthropology" means that many ethnographic collections are becoming less

relevant to their universities' academic activities. Similar shifts in research interests are also sometimes evident in relation to archaeology or palaeontology collections. Yet university museums house very important historical collections, a considerable part of the national estate, and many of these collections were put together as a result of research or teaching requirements.

Of course all museum work is based on solid research and any good curator is a researcher. No good exhibition can be mounted without considerable background research, evidenced in the curation, text and any publications accompanying the exhibition, as well as in the design and communication techniques used to convey the themes of the exhibition. Managing and displaying a collection needs research, and research and discovery is an exciting part of all museum work. But this exhibition-based research aside, there has been a profound change in museum based research in all museums, university and state.

Management implications

Because these changes represent a major change in direction, it has implications for the management of university museums if they are to develop new roles and survive and prosper. They will need to be managed not by academics as an adjunct to an academic department, but by museum trained professionals, full-time managers or directors, whose business is to lead and manage the museum for use by all its various audiences. All museum directors need to have good academic qualifications, and this is particularly significant for a university museum director where the ability to meet academic colleagues as equals is very important. The museum needs to be managed first as a museum, and secondly as an in-house centre for research. The museum director needs to be well educated, but not primarily a scholar: an organiser, promoter, marketer and communicator, with good political and PR skills and high energy levels. No longer should the university museum be seen as a fiefdom of the academic, a private research laboratory of academic curators. The museum must be autonomous of the academic department and the collections must be properly managed, with attention paid to the levels of collection documentation, and with professionally designed and mounted displays which do not contrast unfavourably with those in the rest of the museum sector. Exhibitions will tell stories, generate new or different ideas, use the valuable collections of the museum, and present the excitement behind the disciplines represented in the collections.

Collection access

There is also a growing emphasis on making the collections available for access by others, rather than for research by those employed by the museum. In 1997 I and museum colleagues at three other universities, applied for and obtained a grant from the main federal research granting body, the Australian Research Council. This grant was to develop a combined catalogue, with pictures, of the holdings of university museums at four universities and to make this catalogue available on the Internet. The justification for the grant was to create a piece of infrastructure that would make the collections more widely available for teaching, reference and research, both within the university and within the wider educational community. In other words, the aim was to treat the object and specimen collections of universities as a resource in a similar way to the resources held in libraries, making these resources as widely accessible for teaching and research as are library materials. The database has grown to include the collections of seven universities, although the project has run into difficulties with continuation funding. There is some evidence that it has increased the amount of research on or at least use of the collections. The grant itself and the support of the member universities are evidence that funding bodies believe the role of university museums is to make the collections accessible to others. It certainly raised the profile of university museums on all the campuses co-operating in the venture.

Dispersal of collections

In Australia it is often the case that the person with responsibility for managing a collection, departmental museum and sometimes a university museum, is an academic, untrained in museum management and documentation, who is given no salary loading, credit, nor recognition in promotion applications for his/her work with the collection. If the collection is a small collection used entirely for teaching, this may be appropriate. But there is such pressure on academic department budgets now, that even the minimal expenditure that is entailed in running these little collections or smaller departmental museums is too much for some departments. It seems inevitable that many of smaller museums and historical collections, especially those that are really just corridor displays, will be dispersed. Indeed, several such collections have been dispersed entirely in recent years, occasionally transferred to the state museum and sometimes lost by improper disposal.

Where there is a well-run university museum, managed by staff whose first responsibility is to the museum, such collections could relatively easily be assessed and absorbed into the university collection. Increasingly, the university museum will become a museum of the history of the university, a museum of the history of its research and teaching in science and other collection based disciplines.

Financial implications

Given these changing directions, the museum director increasingly needs to justify the financial contribution of the university by using the educational and cultural attractions of the museum to lure potential students, and by favourably increasing the public focus on the university. The changes to the museum's role in teaching and research programmes increase the need for the museum to focus on its other, public role: the prospective student enticer, the community service, the presenter of the university as a seat of culture. The museum becomes a showcase for the university, which increases its prestige in the community and which adds to the quality of life for all who are associated with the university.

Whilst museum staff can see a new but comprehensible and increasingly important purpose for the university museum, this vision may not be shared by the senior management of the university who, for many reasons, may not appreciate that there could be a new role for their university museum. Museum staff are frequently isolated from their academic colleagues, and sometimes more importantly, from their museum colleagues. The reporting lines are not always clear, and do not always reach the decision-makers.

This paper has primarily focused on non-art museums. In a way, art museums in universities have always been in the position of representing the more social goals for the university as culture for the students and proof that the university is a centre of culture and ideas. And more frequently than with discipline based museums and collections, they have been run by museum professionals rather than as an adjunct to an academic department. Is their relatively greater prominence and importance to senior management in part a reflection that in many cases they have been professionally managed for many years?

If university museums have a public role, as argued above, then who should pay for it? When the university museum was wholly devoted to the core business of the university, then the university paid. I am suggesting that university

museums can now be justified as the mark of a successful and prestigious university, part of its public outreach, and a community service. In Australia there is no recognition by way of public funding for any contribution to the cultural life of the community. Indeed, there is no funding allocated especially to university museums and collections in any of the grants made to universities. It is entirely up to each university how or whether it funds its museums, and since in Australia universities are federally funded on the basis of the number of students enrolled, any funding has to be "taken" from funds generated by student income. When overall levels of funding to universities have been cut as drastically as they have in Australia over the last six years, the reasons for retaining or further developing a university museum must be powerful.

Additionally, it is very hard for a university museum to get any sort of funding from the traditional museum funding and grant giving bodies, either for operating costs (impossible) or for special projects. The university museum is often isolated from the rest of the museum community, and there is a public perception that universities owe it to the community to give something back to the community. Add to this the public perception that universities are rich, and funding from outside bodies remains unlikely.

Conclusion

While there are dual roles, one, the public role, is now the way of the future for the university museum. The collections need to be managed so that others may use them for research or for other purposes. In some cases, management may mean safe storage until the pendulum of research swings again to a re-examination of the physical record. University museums need to make displays relevant to the various curricula of their universities and schools, to be available for teachers, at all levels. They need to be scholarly in their exhibition research and publications. In all this, they are reflecting the core business of the university. However, they also need to recognise and promote their role as part of the public face of the university, part of its responsibility towards the community, promoting the wider role of the university itself in being a guardian of and developer of cultural life. This has implications for the funding of the university museum and for its management.

REFERENCES

BOYLAN, P.J. (2000), "Universities and museums: past, present and future", *Museum Management and Curatorship*, Vol. 18, No. 1, pp. 43-56.

1.3. THE CHALLENGE OF THE UNIVERSITY MUSEUM

by

Dominick Verschelde, Belgium

Abstract

University museums have to face a variety of challenges. Contemporary scientific collections have to find cheap but durable solutions to many technical problems. They must also face an area of concern for museums all over the world: the inheritance and transfer of collections, and the legal complications that often follow in efforts to preserve the specimens for the future generations.

Introduction

Founded in 1817, Ghent University immediately started several scientific collections in its different disciplines as purely educational and research resources for the university students. For 100 years the Zoology Museum thrived on the expertise of its large number of scientific and technical staff members. Nowadays, the museum has to struggle against all odds to survive. In these modern times adequate staff, time and funding are expensive luxuries which we regrettably cannot enjoy. We house a large and quite unique collection of animal specimens of great educational and historical value for which we constantly have to reclaim recognition, funding and space.

In the title of this paper, the "challenge" clearly refers to the day-to-day effort those working within university museums and collections have to make to ensure the continuing existence and preservation of specimens for present and future generations. Like many natural history museums, our museum has to cope with problems such as UV-light, museum beetles, loss of information, poor storage and exhibition conditions, lack of sufficient staff and adequate funding, etc. A further major concern and challenge we have to face on an almost daily basis results from the fact that our museum is housed in a cellar. Firstly this means we can only reach our public through advertising as the

"person in the street" cannot see the museum as s/he passes the building. Secondly, all year round we have to beware of in-flowing water coming from the building above or from heavy rainfall. Hence we constantly have to search for durable solutions for many of our problems.

Zoology Museum, University of Ghent, Belgium: a bushbaby

Source: the author.

Examples of technical problems and suggested solutions

Two particularly time-consuming technical problems are the labelling of specimens and evaporating preservation fluids from specimen jars. Natural history museums, especially those within universities, often have quite old and extensive scientific collections which have to be preserved for all time (*e.g.* collections with type specimens). It is of the utmost importance that such collections are kept in good condition and never get lost.

Labels of specimens were once all written by hand in East-Asian black ink. The ink is durable but after more than a 100 years starts to fade away. The labels themselves get dirty quickly and become brittle after a few decades. Some labels of jars in storage fall off and get lost. Every time the time-consuming effort of rewriting labels and exchanging old for new has to occur, we chance labels being switched from different specimens.

In modern computer times, producing newly printed labels is not that difficult. Computer printing also solves the problem that some handwriting is difficult to read. The software used for our inventory and labelling is Access® from Microsoft®. We have tackled the problem of paper becoming dirty and brittle by using a lamipacker: every label is melted into a plastic cover or polyester film sleeve which is very durable and dirt-proof. The labels are then glued onto the jars with silicone which is much more durable than the ordinary glue people had to use before. The polyester film sleeves can also be used to preserve old and important brittle labels to protect them from further deterioration (Hawks and Williams, 1992). Furthermore the same polyester film sleeves are used in our botanical garden for rendering the outdoor plant-labels (plant-pins) more durable.

The biggest problem of a natural history collection is preventing fluids evaporating from specimen jars. Formaldehyde is not especially volatile but it is toxic (carcinogenic), alcohol is volatile and inflammable. In addition, when the preservative evaporates and the jar runs dry, the specimen is irretrievably damaged. Three to four times a year we have to check all jars and refill them which takes an enormous amount of time and effort. So for the well-being of the specimens as well as the safety of the personnel, it is of the utmost importance that no preservative evaporates out of the specimen jars.

Jars with plastic or metal screw-top lids as described by Suzumoto (1992) are not suitable as alcohol evaporates quickly from these; formaldehyde does not, but in time the metal screw-tops rust and plastic ones become brittle and thus of no use for long term storage. Problems with ground glass stoppered jars start when lids get switched from one jar to another, which causes the jars to no longer close tightly (Clark, 1992). On the other hand, as Suzumoto points out, some tightly closed ground glass jars do not open at all without danger of breaking. Fluids from many ground glass jars can evaporate, often quite quickly.

Several countermeasures were tried in our museum including parafilm, silicone, vaseline, and paraffin wax. All products were applied as a seal between the lid and the neck of the jar and results were checked after a few months or years. Most were unsuitable but one has proven to be a satisfactory remedy. Baysilone-paste® (Bayer) or other silicone-based grease helps in closing and opening jars. It gives extra grip on the joint in such a way that the jar is tightly closed preventing evaporation but still enabling the jar to be opened afterwards. This product combined with toughened borosilicate glass jars (which have a lower expansion coefficient) gave the best results. Such jars are well worth the additional expense.

The problems of inheritance and transferring collections

Aside from the technical issues stated above, I would like to raise an issue which concerns all museums all over the world: the inheritance or transfer of collections and the juridical complications that often follow in our efforts to preserve the collection specimens for the future generations. We need to take a clear and unanimous stand on this problem to be able to present our case to our superiors and our respective governments.

People who own private collections have been known to donate them to a museum when they die. Often they add some special conditions or guidelines in their will in order to be certain that the collection is well taken care of and does not get lost. Here the problem starts: on numerous occasions we have seen that such conditions which were intended to ensure the preservation of a collection are often the cause of its ruin. As the museum has to honour the guidelines of the will it can find itself trapped in a situation in which it cannot provide the best possible care for the collection.

The two most commonly used restrictions are: "The collection cannot leave that museum or town" and "The collection cannot be divided". If for financial or infrastructural reasons a museum is not capable of taking care of the whole collection or part of it, it cannot be sent to another, more suitable, museum because of the guidelines set in the will. One is almost forced to let the collection deteriorate in front of one's own eyes as the will prohibits the transfer of the collection, whole or in part, to another institution. Some even recommend that such an inheritance should be refused when there are numerous or complicated restrictions.

Another problem directly related to inheritance are the death duties or inheritance taxes which in Belgium, as in some other European countries, are very high for third parties. Some museums cannot accept inheritances because they cannot afford the death duties. Although reduced rates are available from the government, it is not always clear which institutions are eligible. Subjoining the addendum "no commercial value" to the will to avoid inheritance duties is no solution either as the government often has the legacy valued anyway.

A similar discussion arises concerning the transfer of collections themselves: is ceding and transferring a collection wrong or a justified transfer of knowledge and culture? The International Council of Museums cautions us to be very careful in such matters, points out the grave responsibility involved and would advise against it in many cases. But we have to keep in mind that not all museums have enough knowledge, staff, infrastructure or funding to take care on a permanent basis of every specimen they get into their collection. We have to be brave enough to place the importance of the collection specimens above that of the museum.

Possible solutions for problems of inheritance

There are a few possible solutions to the problem of death duties. First of all, if you are aware of any person who wishes to donate his/her collection to your museum, ask them to do so while they are still alive. In that case not only do you avoid inheritance taxes but also any problems over restrictions written down in a will. If people prefer to give you the collection after they have died, ask them to donate "free of taxes". This is a legal formula which means that the death duties are paid by the relatives themselves rather than the receiving third party (the duties will be at the full rate). Another possibility is that the children of the potential donor inherit the collection with an agreement that they then give the collection to the museum afterwards. This means that the relatives only have to pay the reduced (first party) rate of inheritance taxes. Of course in such a case you have to be certain that the relatives are all in agreement on following the suggested course.

Dealing with the restrictions set out in a will is another matter. The best solution would be if you know that someone is going to give your museum a collection to try to persuade them not to write down any restrictions. You should stress that as preservation of specimens is the priority of museums anyway there is no need to make the donation conditional.

If restrictions have been written down and if a museum is not capable of ensuring the safety and preservation of a certain collection, the management should be able to legally ignore the restrictions of a will and transfer the collection. This places the importance of the specimens up front. We should get an international agreement that the interest of collection specimens has to come first, the interest of the will second. For the time being, however, what can be done to circumvent restrictions of a will is not to transfer the collection to another museum which can take care of the specimens, but to lend it out for an indefinite time.

The transfer of collection specimens is a delicate and at times even dangerous subject. But again we have to take our responsibility in insuring the preservation of our collections. A possible scenario is that in problem cases it would be permissible to transfer the collection to another museum or specialist in charge of scientific collections. The museum or specialist would technically and scientifically take care of the collection in question, with the clear and binding written agreement that the collection can never get into private hands. If the new "owner" in its turn would in the future not be able to ensure the safety of the collection, it would have two options. It could either return the specimens to the original museum or negotiate with the original museum on taking appropriate action as to which other new facility the collection should be sent to. By including the original museum in each possible transfer, the museum keeps track of the collection or specimens at all time.

Conclusion

We must convince others that preservation of collections for future generations is our primary aim as a university museum. By showing we have the ability to do so through our solutions to the many technical problems that we face we should also be able to convince people to donate collections while they are still alive and without written restrictions.

REFERENCES

CLARK, P.F. (1992), "Ground glass stoppered jars for fluid collections", in C.L. Rose and A.R. De Torres (eds.), *Storage of Natural History collections: ideas and practical solutions* (second printing, 1995), pp. 221-223.

DE ZUTTER, W. *et al* (1988), *De deonthologische code van het museumberoep*, ICOM.

HAWKS, C.A. and WILLIAMS, S.L (1992), "Polyester film sleeves for protection of fragile or damaged specimen labels", in C.L. Rose and A.R. De Torres (eds.), *Storage of Natural History collections: ideas and practical solutions* (second printing, 1995), pp. 257-258.

SUZUMOTO, A.Y. (1992), "Storage containers for fluid-preserved specimens", in C.L. Rose and A.R. De Torres (eds.), *Storage of Natural History collections: ideas and practical solutions,* (second printing, 1995), pp. 217-220.

VERSCHELDE, D. (1997),Vraagstelling rond en mogelijke oplossingen voor de administratieve en technische problematiek van een natuurhistorisch museum, gerelateerd tot het Museum voor Dierkunde van de Gentse Universiteit,unpublished dissertation.

SECTION 2
RAISING AWARENESS AND WORKING TOGETHER

2.1. COLLECTIONS IN THE UNITED KINGDOM

by

Kate Arnold-Forster and **Sophia Mirchandani, England**

Abstract

The nationwide survey of university and higher education museums, galleries and collections (HEMGCs) in the United Kingdom, sponsored by the Museums and Galleries Commission (MGC), has established a substantial body of basic data on the extent and distribution of this significant cultural resource including both internationally recognised museums and a diverse range of smaller specialist collections. The findings highlight the unique strengths of HEMGCs, and trace a discernible change in their ideology and outlook as many have increasingly sought to serve wider audiences. But the research also points to the diminishing role of many smaller HEMGCs within the context of their own institutions, and of their increasing neglect. The impact of the survey in shaping development strategies of regional museum agencies is illustrated by recent initiatives that have followed. These demonstrate the growing integration of university museums within the UK museum community, and include innovatory projects that seek to address the needs of HEMGCs; in helping to raise standards, introduce new management structures, secure new funding, increase skills and improve and broaden access and use.

Introduction: the national survey

Over the past decade a national survey, principally funded by the Museums and Galleries Commission and, since 2000, by Resource (the Council for Museums, Libraries and Archives), has sought to establish basic data on the museums galleries and collections held by universities and higher education institutions (HEIs) in the United Kingdom. This review process is now nearing completion,

and has identified an estimated 400 higher education museums, galleries and collections (HEMGCs).

The results provide a source of published information, identifying and in some cases, describing for the first time the museums and collections of UK universities and colleges. In doing so it has accomplished an important objective by raising awareness amongst those HEIs with immediate responsibility for individual HEMGCs but also amongst regional agencies for museums, and other national funding, policy and strategic bodies. The survey's scope has been inclusive, dealing with all kinds of collection, regardless of scale and type of material. Thus, it has brought together internationally recognized university institutions, including major collections, such as those of the Courtauld Institute, the Manchester Museum, the Whitworth Art Gallery, the Ashmolean and the Pitt Rivers Museums, and the Fitzwilliam Museum, with small specialist departmental collections of fewer than a hundred objects. Organised on a regional basis, its findings reveal the diversity and richness of these collections, pointing particularly to strengths that lie outside areas of acquisitions of the mainstream museums' community other than national institutions. These include large-scale systematics collections, major research holdings in ethnography, numismatics, and the history of science, and an increasing number of contemporary art and design-related collections.

Common problems

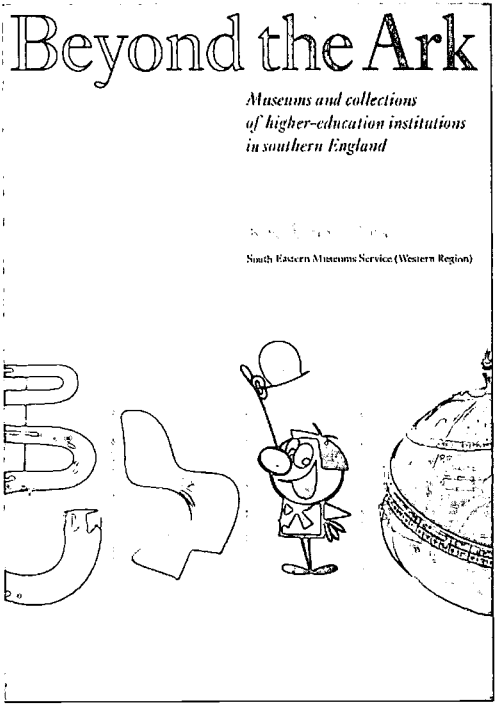
The purpose of the survey has not been (at least explicitly) to assess needs, but the findings, conclusions and recommendations of successive survey reports have emphasized many common problems. Inevitably, the most obvious is the issue of insufficient and diminishing resources; a tiny fraction of identified HEMGCs receive any form of regular core funding, and of these only 21 collections or museums within 13 HEIs currently attract non formula or special funding from higher education sources [now administered by the UK Arts and Humanities Research Board (AHRB)]. The survey demonstrates that overall collection care and management amongst HEMGCs has fallen significantly behind the rest of the museums community, and that the development of access, public services and interpretation have likewise failed to keep pace with progress elsewhere.

A significant finding has been that up to 75% of the HEMGCs identified by the survey are barely known outside the academic faculty or department to which

they belong. Yet equally that the remaining 25% of HEMGCs (around 100 museums) have developed roles beyond the immediate teaching and research of their departments and institutions, and are recognised for their cultural, educational, academic and even economic contribution to the wider community. Over the course of the survey process a discernible change has taken place in the ideology and outlook of UK HEMGCs. Teaching and research are no longer necessarily the exclusive priority. University museums in varying ways have increasingly sought to serve wider audiences: through exhibition and permanent displays, and through education and public services. Many larger HEMGCs have shown themselves to be amongst the best placed museums in the UK (outside the nationals) to attract capital sums for projects, offering benefactors the double benefit of association with prestigious academic institutions and a permanent memorial within a major cultural landmark. The Heritage Lottery Fund (HLF) and other funding schemes have made a substantial contribution to major capital projects, which at best have been groundbreaking in using academic collections to explore innovative interpretation and access, and in giving new prominence to what university collections can contribute to the general public. Smaller HEMGCs have also made important strides; towards improved collections care, recognition by national standards schemes and in confirming and developing new cultural and educational roles.

The outcomes of the survey

The survey has had both a practical and strategic impact. The published reports have raised issues about the care and management of HEMGCs, accompanied by recommendations. Inevitably responses have been varied, though often positive; in some cases the survey findings have led directly to improvements, while in others the reports have served more as a basis for building new agendas and strategic alliances, usually with external organisations. For example, follow-up action has involved closer involvement for HEMGCs with regional museum agencies leading to specific advice and support for museum development. One practical result has been the appointment of a number of professionally qualified curators and museums development posts, part-funded by regional museum agency grant-aid. Another has been that many universities have taken steps to introduce unified management structures, under the aegis of central committee.



Front cover of *Beyond the Ark* depicting:

- 3-key serpent, c. 1800, the Bate Collection of Musical Instruments, University of Oxford
- Verner Panton Chair, 1960, Fine Art Valuation Study Collection, Southampton Institute
- Halas and Batchelor: Foo-Foo, Southampton Institute International Animation Research Archive
- Spherical astrolabe, 1480-81, the Museum of the History of Science, University of Oxford

Cover designed by Laura Gingell and Julie Colman, students at the Department of Typography and Graphic Communication, University of Reading.

On a regional level the survey has helped shape new relationships between regional museum agencies and HEIs and has informed the development of regional cultural agendas. This is particularly well illustrated by the work of Southern Museums Agency, a government-funded regional advisory and development organisation for the Central Southern area of England. Since the publication of *Beyond the Ark* (1999) (see picture above), the survey of their region, Southern Museums Agency have identified a series of clear objectives arising from the findings and recommendations. Their subsequent efforts have focused on instigating and supporting various initiatives with HEIs particularly over access development. These include advice towards a successful joint application to HLF by two museums of the University of Oxford, the Pitt Rivers Museum and the Oxford University Museum of Natural History, to fund three posts (an access research post shared between the two museums, and two part-time education posts). The results will include pilot studies and research on attracting new audiences to university museums that should have model value, regionally and nationally.

A valuable networking opportunity was provided for those working with HEMGCs in the region by a conference to mark the launch of the publication organised by Southern Museums Agency in collaboration with the University Museums Group. It has been followed by a meeting for representatives of university geology collections to discuss common needs and a possible joint project to fund a peripatetic specialist geology curator for university collections in the region. Southern Museums Agency has also advised the University of Reading over museum and collection development in the light of the survey findings. This has led to grant-aid towards the development of an external funding application for a university collections development post, as well as strategic advice on major capital developments and on a project to help develop access for the Museum of English Rural Life at the University of Reading. Southern Museums Agency's future ambitions include involvement on a similar basis in advising other HEIs in its region.

Conclusion

Overall, the increased integration of university and college museums within the UK museum community should be seen as the survey's most important outcome. In effect, it has produced a commentary on a period of unparalleled change amongst higher education in the United Kingdom and the consequences for its museums and collections. At the same time it has acted as a catalyst to a

revival of interest in the sector. Today, it is no longer accurate to portray all UK HEMGCs as insular and academic, lacking any commonality with the rest of the museum community. One discernible indication is that ninety HEMGCs are now recognized by the UK Museums Registration scheme, administered by Resource. A further sixteen university museums have been designated as collections of national importance, through which derive significant new funding opportunities from the Designation Challenge Fund, supported by the Department of Culture, Media and Sport.

REFERENCES

ARNOLD-FORSTER, K. (1989),
The Collections of the University of London, London Museums Service (SEMS).

ARNOLD-FORSTER, K. (1993),
Held in Trust: Museums and Collections of universities in Northern England, Museums and Galleries Commission.

ARNOLD-FORSTER, K. (1999),
Beyond the Ark – Museums and Collections of higher-education institutions in Southern England, South Eastern Museums Service (Western Region).

ARNOLD-FORSTER, K. (2000),
"A developing sense of crisis: a new look at university collections in the United Kingdom", Museum International, Vol. 52, No. 3, pp. 10-14.

2.2. THE CINDERELLA COLLECTIONS: AN AUSTRALIAN FAIRY STORY

by

Di Yerbury, Australia

Abstract

Recent changes in the global and national context for Australian higher education resulted in severe budget restrictions which had particular and negative impacts on university museums and collections. Establishment in 1992 of the Council of Australian Museums and Collections (CAUMAC), was a turning point. This led to a national review by the Australian Vice-Chancellors' Committee (AVCC, the Council of Australian University Presidents) and a report in 1996, Cinderella Collections, which generated wide acceptance and support from the university and museum community. Recommendations from the review addressed funding, policies, strategic planning, staffing, resources and user satisfaction for the more than 260 Australian university collections identified. Federal funding subsequently commissioned a national steering committee to conduct a second AVCC review to assist universities in developing and implementing an overall policy, identification of collections and items of national or international significance, and conservation. Transforming Cinderella Collections, published in 1998, reported on progress since 1996 and the findings of a detailed conservation surveys. Twelve strategic factors have been vital to the Cinderella Collections' continuing survival in a difficult era.

Introduction

It has been suggested that everyone identifies with one or other of the fairy stories told to them in childhood. If so, the one which museums personnel have chosen in the Australian higher education sector is Cinderella – and indeed the Cinderella Collections is the generic term by which our university museums and collections have become known in recent years. Thus the tale I have to tell starts with these much-loved and carefully nurtured collections, blooming often shyly, out of the spotlight, under the care of attentive parents. Some of them were the illegitimate love-children of individual academics whose families – the university community more broadly – may scarcely have been aware of their existence. Hard times befell our heroines in the late 1980s, with their circumstances becoming even more harrowing in the 1990s. In some cases their loving parent(s) disappeared, whilst those curators and museum directors in their immediate households had less time (and even less money) to tend to them.

Our Cinderella Collections languished during these fraught years, working harder and harder in increasingly impoverished circumstances. Some of our vulnerable heroines perched precariously on the very edge of survival, year after miserable year, while they watched their flourishing stepsisters - the academic departments of commerce, IT and other areas facing strong market demand - grow ever wealthier.

In the nick of time, along came a Fairy Godmother, in the form of CAUMAC, the Council of Australian Museums and Collections. This Good Fairy publicised Cinderella's plight, and summoned help. And thus it was that, by the end of the decade, a fair few of our heroines are looking forward to a reasonably happy ending. Many have at least been able to go to the ball, decently attired and respectably escorted. If they have not been swept off their feet by Prince Charming, they nonetheless have their fair share of steadfast admirers.

Hard times for Cinderella Collections in the 1980-90s

The dominant trends in Australian higher education in the late 1980s and early 1990s were not dissimilar to those of other western nations – and doubtless they had deleterious impacts on university collections in most of the other countries as well. They were driven in large part by the national economic agenda, which shaped national strategic directions in education, training and research support.

In Australia, these national strategies were designed to help counter economic decline in the 1980s, especially the expanding level of international debt and the contracting Australian export market. This led to attempts to improve Australia's economic performance by linking education and training more strongly with skills formation, with the emphasis on the advanced manufacturing technologies and the economically efficient, value-added service industries. In a higher education system thus required to focus strongly on relevance, university museums and collections were scarcely a high national (or institutional) priority.

In addition, the changing context for universities was marked by globalisation, massive technological change, and competition from new education providers including from overseas. During the late 1980s and the 1990s universities also experienced a huge growth in student numbers; a significant decline in the level of government funding per student; the introduction of new formula-driven funding allocations for teaching, research and capital works; and increasing reliance on user-pays and industry links.

By the 1990s, most Australian universities were experiencing financial crisis, unless they had significant earnings from user-pays activities (such as a large number of overseas fee-paying students). As for university museums and collections, with only limited capacity in most cases for income generation (if any at all) and generally located in the more traditional disciplines, they particularly felt the strain of the straitened budgetary context.

Because universities came under the then Department of Employment, Education and Training (DEET), their collections, unlike those of national non-university museums, received no funding through the then Department of Arts and Administrative Services (DAAS). And because university funding from government comes almost entirely from the national government, their museums and collections received no funding from state governments (unlike the various state-based public museums). There was nothing to stop universities from applying for grants from the various art form boards of the Australia Council, or for research grants from various bodies, but such sources of funds were few and far between, and the amounts were small.

The biggest impact for university museums and collections, as for their host institutions, came from the need to cope with unfunded salary increases, as successive governments in the second half of the 1990s declined to provide supplementation of operating grants to cover such increases in costs. University

administrations and those academic areas which were not enjoying significant growth in student numbers were forced to accommodate job reductions in order to live within their often-shrinking allocations. Departing staff tended only to be replaced if their role was seen as indispensable, and even then their place was often taken by more junior staff. Faculties started reviewing how they could shed non-core activities, and any jobs which were viewed as less essential than others were at real risk, especially in the humanities. Since collections generally did not receive earmarked allocations in institutional distribution of funds, their budgets and even their core staff were vulnerable. Moreover, unlike their counterparts in the United States, Australian universities had little tradition of philanthropy on which to draw – although university collections have fared better in this respect than most other parts of the higher education sector.

Meanwhile, university museums and collections were indeed Cinderellas in terms of the small amount of public attention they received. The Pigott Report on *Museums in Australia* (1975), had included recommendations in respect of safeguarding university collections, providing training for their curators, and properly disposing of collections to other institutions where the parent university was unable or not inclined to provide the necessary care and management.[1]

Fifteen years on, however, apart from some preliminary surveys conducted by Peter Stanbury, we still had little knowledge of how many university collections there actually were, what sort of condition they were in, their holdings, or their roles. We did know that they were almost universally under-resourced in terms of funds, facilities and staff, and that even some valuable and nationally significant collections were in a parlous state. Few university collections were in a position to realise their potential contribution to the core functions of their host universities, and some were actually facing demise.

The Cinderella Collections national review

University museums and collections personnel were in little position to support each other, since networking tended to be piecemeal and relatively informal, until a major step was taken in 1992 in the establishment of the Council of Australian Museums and Collections (CAUMAC), with Professor Barrie Reynolds of James Cook University as President.

1. *Museums in Australia* (1975), Report of the Committee of Inquiry on Museums and National Collections, Australian Government Publishing Service, Canberra, Australia.

Knowing of my own involvement in cultural heritage and the arts, Reynolds, Stanbury and other members of the CAUMAC Executive, including those from my own university, Macquarie, approached me in 1993, as a vice-chancellor (*i.e.* a university president), about the state of collections in the higher education sector. I wrote a report for the Australian Vice-Chancellors' Committee (the Council of Australian University Presidents, known as AVCC). That same year, Barrie Reynolds and I, on behalf of the AVCC, approached the federal Education Department, and the federal Arts Department, suggesting a national review. One could be cynical and suggest that the magic words which triggered their interest were "...up to a billion dollars under threat", but in fact they were sympathetic and responsive, and immediately agreed that a review could be useful.[2]

The following year, the Education Portfolio commissioned through the AVCC, and paid for, the Review of University Collections and Museums. The review was chaired by a man with both senior public sector management and museological experience, Dr Don McMichael. From the universities, I also was a member, along with Barrie Reynolds (himself an anthropologist and director of James Cook University's ethnographic collection); and a specialist in conservation, Associate Professor Colin Pearson of the University of Canberra.

Dr Stanbury, appointed as executive officer for the review, was located at Macquarie which serviced the inquiry and made a lot of in-kind contributions. There he became, and remains, the co-ordinator, in my own office, for museums, collections and heritage. The Education and Arts Departments each added a sympathetic "observer" to the review team, both of whom were co-opted as willing, hardworking contributors. In February 1996, our report, titled *Cinderella Collections,* was launched, amidst a gratifying amount of media coverage (which suffered not at all from the fact that exhibits are often highly photogenic).[3]

One of the surprises was to find that there were over 260 university collections in Australia, some of them being what we termed "feral" collections, having

2. More details of the problems facing collections before the national review, and origins of the review, are provided in D. Yerbury (1993), "University Museums and Collections", *Aesthetex: Australian Journal of Arts Management*, Vol. 5, No. 2 pp.1 - 9.

3. D. McMichael *et al.* (1996), *Cinderella Collections: University Museums and Collections in Australia*, AVCC, Canberra, Australia.

been set up without institutional approval (or even knowledge) by individual staff who used the holdings for teaching purposes. When the staff departed, the collections often languished rather than being formally recognised, or disposed of appropriately.

In terms of subject matter, art collections were the most numerous and best-protected, with 44 in 1996 across Australia, located in most of Australia's 36 universities, ranging from large, significant collections in excellent galleries, with dedicated staff, and extensive roles, such as could be found in the universities of Melbourne, Monash and Western Australia, to many small collections dispersed on campus, and mainly used for purposes of campus enrichment. Other collections identified by the review were categorised as follows:

Subject or field	Number
Aboriginal and Torres Strait Islander Studies	10
Ancient History, Archaeology, Anthropology, Classical Archaeology, Ethnology, Historical Archaeology, Material Culture	17
Collections in Archives, Library non-books, Maps, Photographs	23
Art, Fine Art, Sculpture	44
Education, Childhood	5
Engineering, Surveying	7
Geology	21
Herbaria	13
History	10
History of Science, Various Sciences	19
Micro-organisms, Living Collections	22
Medicine, Dentistry, Nursing, Pharmacy	28
Music	5
Veterinary	4
Zoology, Entomology, Agricultural Entomology	18
Other Museums and Collections	16

The Cinderella Collections review team reported extensively on the many problems which they found, including the lost potential; and concluded that it

must be a matter of national concern to identify, to conserve adequately, and to make easily accessible those items and collections in Australian universities which could properly be considered to be part of the nation's distributed national collection.

Recommendations of the Cinderella Collections review

The ten most significant sets of recommendations from the review team were as follows:

- The Commonwealth Government to provide one-off special funds of AUD 5 million over five years to meet urgent conservation, storage, documentation and exhibition needs.

- The Commonwealth Government to provide a programme of matching grants for recognised collections to assist with care, conservation and access regarding collections of national significance.

- The Australian Vice-Chancellors' Committee to establish an expert standing committee for five years, chaired by a vice-chancellor.

- Each university to adopt an overall policy in respect of its museums and collections, including a formal recognition policy whereby it would designate those significant collections which it would commit itself to support adequately on an on-going basis.

- Each university to consider identifying a senior reporting officer (such as a pro vice-chancellor) for the collections and museums in its care, and/or an advisory committee, with access to museological expertise, for co-ordination purposes.

- Universities to ensure that each of their collections had a written, approved strategic plan (a model strategic plan was provided in the report).

- Universities to recognise museums and collections staff as a distinct occupational group (like librarians) with appropriate pay, qualifications, level of responsibility, performance criteria, training, etc.[4]

- Universities to ensure adequate resourcing of their museums and collections (including sharing of staff, if necessary, or use of consultants).

- Universities to ensure adequate funding of those collections to which they gave formal recognition.

- Museums and collections staff to survey their users regularly.

Transforming Cinderella Collections – The second national review

The Cinderella Collections review attracted a lot of attention and support, especially but not exclusively from universities and from the museums community more generally, and there was widespread acceptance of the validity of the findings. Nevertheless, neither the recommendation to provide AUD 5 million in one-off special funds, modelled on the outcome of a previous national review of Australian university libraries, nor the proposed programme of matching grants for nationally significant collections, was taken up by the Australian Government. However, the Department of Arts and Administrative Services did provide enough additional funds to the AVCC to enable a second review to be carried out. The aims of this review were to: assist universities to develop and implement an overall policy; assist universities to recognise those collections to be maintained in the long run; identify collections or items of national or international significance; survey the conservation state and needs of at least one collection per state/territory which was both significant and vulnerable; and assist in preparation of a national strategic conservation plan.

As for the recommendation to the AVCC to establish an expert standing committee for five years, to be chaired by a vice-chancellor, this was not acted upon in its original form. However, a follow-up National Steering Committee

4. Reference was made to the National Museum Competency Standards, 1994, Arts Training, Australia.

did result, chaired by myself, and comprising the same membership as the original Cinderella Collections review, in order to carry out this second review. The grant and the review were administered through Macquarie University, which again was able to provide some services on an in-kind basis thus ensuring, as in the case of the original review, that the government dollar went a long way. Consequently the review team was seen to be giving very good value for a relatively modest amount of money. The second review team in its 1998 report *Transforming Cinderella Collections: The Management and Conservation of Australian University Museums, Collections and Herbaria* reported on progress since 1996, and more specifically on the findings from a detailed conservation survey returned by 136 collections.[5]

As part of the review process, professional conservators provided conservation assessment reports on fifteen collections which were both vulnerable and of national significance. The fifteen collections were spread across every state and territory of Australia. They were reported (without identification of the individual collections) in the publication in such a way as to provide useful guidelines for collections personnel across the sector.

There were eleven new recommendations in this second report, which focused in particular on conservation, safety, disaster preparedness, and the skills development of museums and collections staff.

Follow-up action by the Cinderella Collections

One outcome of the two reviews was that they significantly raised the awareness and indeed interest of Australian vice-chancellors in the museums and collections for which they were responsible. While the AVCC itself did not set up an on-going standing committee, as recommended in the first report, the Sydney-based New South Wales Vice-Chancellors' Conference (NSWVCC) accepted my recommendation that it do so to cover universities in New South Wales and the Australian Capital Territory.[6]

5. See www.amol.org.au/craft/publications/miscarticles/cinderella_contents.asp as well as published form from AVCC.

6. The work of this standing committee and initiatives at Macquarie are described in Peter Stanbury's paper in this publication. See also the paper by Vanessa Mack above which refers to the Australian University Museums On-Line programme, another follow-up initiative.

As noted above, the "new world" for Australian universities is characterised by globalisation, including the enrolment of students from all over the world, and especially the Asia-Pacific region. As a further follow-up to the reviews, Australian university museums and collections, particularly those encompassed by the NSWVCC's standing committee, have been vigorous in accessing the potential of the new internationalism in recent years. For example, some collections are being used in the teaching of Australian Studies to Study Abroad students. There are frequent international visitors to the museums and collections. As for travel in the other direction, attendance at international conferences by Australian delegates, especially from the membership of the NSWVCC's Standing Committee, is often higher than those from any other nation (except, sometimes, the country which hosts the conference), while Australians have helped organise two such conferences in 2000. Papers from Australian museum personnel often appear in international journals, including two issues of *Museums International* featuring university collections.

As for follow-up action in respect of the reviews by individual institutions, Macquarie itself cannot be put forward as a typical university in its support and management of its museums and collections, insofar as it strategically positions itself to be a leader in this regard. However, the steps it has taken do have their counterparts in some of the strategies pursued also by a range of other universities.

While Macquarie's governing body was one of the first to formally adopt a university-wide museums and collections policy, these are now quite commonplace; and some collections have been formally recognised. Macquarie's own co-ordinating committee of museums and collections personnel from all parts of the university predates the national reviews, but other universities now also have such arrangements. Similarly Macquarie and other institutions have introduced new reporting structures whereby a senior officer (such as a pro vice-chancellor) is given overall responsibility for museums and collections, both to ensure that the university executive are fully informed about the issues collections staff are facing, and also (it is hoped) to achieve the benefits of a powerful voice speaking on behalf of the collections when resource decisions are being made.

Macquarie, like other universities, has a Museums and Collections Strategic Plan and the role of collections is embraced within the university's Academic and Strategic Directions and the Community Outreach Plan. For purposes of public accountability, the performance of the museums and collections is

regularly reported in the university's Quality Assurance Report to the federal Education Department, and in the Annual Reports to Parliament.

Central funding is allocated to assist academic divisions to maintain the employment of staff in four designated collections (Biological Sciences, Earth Sciences, the Museum of Ancient Cultures and Australian History), and to support the students' own visual arts project Art on the Move. The Vice-Chancellor's Office bears responsibility for the university Art Gallery and the Sculpture Park; the salary, travel, etc., of the Museums and Collections Co-ordinator; and the (modest) subscription to the standing committee, and the in-kind services involved in co-ordinating it. Central funds are also available for conservation, valuations, security measures, etc., as well as for co-operative and university-wide initiatives such as the web page, and the ADLiB (Museum Information Access) project. One strategic funding initiative at Macquarie which makes a great deal of difference to its museums and collections over time is perhaps not common amongst Australian universities. Under its Capital Management Plan, Macquarie provides for the substantial refurbishment (and if necessary relocation) of one museum or collection each year.

The museums and collections on the Macquarie campus have been very energetic in seeking to increase their contributions to university life, and play a particularly popular role on open days and during Museums Week, as well as supporting core teaching and, in some cases, research. The museums and collections add particular value to Macquarie's School Links Programme, and it is common to see bus-loads of school children making their way from one collection to another. New partnerships have been formed, and the university community is regularly updated via newsletters circulated by the combined collections committee and reports to Senate and the University Council. In all, it would be true to say that, while they still have their problems, including the many heavy workloads of their staff, morale is high amongst the university's collections and museums, and they enjoy a very prominent profile on campus.

Twelve lessons for getting the Cinderella Collections to the ball

To finish up with the theme with which I began, the moral of my Antipodean fairy story is one of optimistic self-help. Rather than sitting back and waiting for Prince Charming to rescue them, the Cinderella Collections in Australia, like those universities which themselves have been successful in the new era for higher education, have focused on:

1. Becoming more relevant (and, where possible, indispensable) to universities' core business of teaching and learning (including helping students to develop generic skills), research and community outreach.

2. Being strategic, including in terms of formulating their own strategic plans, and getting themselves included in the university's overall strategic directions.

3. Identifying and linking with powerful champions in the university.

4. Making friends, including among staff, students and university executives, who would support them if they were under threat.

5. Associating with positive events, on campus and beyond, including open days, launches, special exhibitions, prize-givings.

6. Gaining strength and synergy through strategic partnerships, and networking.

7. Becoming more professional, including in terms of management expertise, backed by collectively organised staff development programmes.

8. Getting smarter about tapping into sources of funds and other help, including internal and external grants and more competent, including in terms of business planning.

9. Developing a more international outlook in their interests, links and outreach.

10. Using new technologies in all their activities, including their cataloguing, access, involvement in teaching, and promotion.

11. Building up their accountability, and reporting on key performance indicators to all those decision-takers who might have a say in their futures.

12. Achieving far greater visibility, inside and outside universities, including with their own newsletters and webpages, and by successfully seeking beneficial media coverage.

Conclusion

The 1980s and 1990s were difficult decades in most parts of the world, not only for universities, but also for the collections which they housed. They spawned a new era in which success in the higher education sector depended in large part on entrepreneurial initiative, relevance, self-promotion, strategic partnering, internationalisation and use of new technologies. The Cinderella Collections in Australian universities, especially those of New South Wales and the Australian Capital Territory which have banded together for mutual support, have learnt how to exploit these factors in order to add demonstrable value to their host institutions' key functions. Therein lies the key to their continued survival.

2.3. MANAGING THE VISIBILITY OF UNIVERSITY MUSEUM COLLECTIONS

by

Peter Stanbury, Australia

Abstract

Museums, collections and herbaria in universities need to be managed responsibly, but unique factors can isolate and discourage university curators. Proper care of the collections in universities protects national and international resources. This requires close contact between university curators and other sectors of the museum profession, and an understanding of collection requirements and responsibilities by senior university managers. Inexpensive, effective actions, such as careful listening and clear communication, can revitalise collections in universities. The actions help both university curators and senior managers discharge their responsibilities for their collections. Recent networking and partnership experiences in Australia have proved effective. The formation of further national and international partnerships involving universities with collections could benefit heritage worldwide. New technology should be a significant aspect of the process.

"Life leaps like a geyser for those who drill through the rock of inertia" (Alexis Carrel)

Introduction

The collections held by universities form an important resource for both local scholars and for others outside the campus. However, many smaller university collections lack adequate facilities and those immediately responsible for their care often feel that they have been placed in a difficult and unusual situation.

Some feel anxiety or shame about the collection's condition and in such circumstances curators may seek to protect the university's or the department's reputation by discouraging access to the collection or limiting information about it. Feeling they cannot rectify the situation, they isolate themselves and are reticent about the real state of the collection.

Although not widely realised, the staff of many small university museums or collections are in a similar situation. The feeling of isolation is often increased because those who care for the collections believe they are powerless to make changes. Support from supervisors may be lacking, resources may be inadequate, few people may use the collection, modern syllabus content may appear to bypass the collection area, and colleagues working in the same field may be distant. It is indeed difficult working alone to bring about significant changes.

However, no university collection is entirely useless or really isolated – it is a question of recognising strengths and managing them to their full potential. Like the stock market, the value of collections waxes and wanes naturally over the years as research follows new paths. Properly stored sources of information, which is what collections are, can be available for testing hypotheses and extracting information at short notice. Even an uncatalogued and neglected collection can provide information, though the task is uphill by comparison. Every collection will have times of high and of lesser use, but while a collection remains, it has potential. In contrast, a collection destroyed or thrown out is lost forever.

The quotation at the beginning of this paper can be aptly applied to the task of making university collections more visible. There is necessity not only to drill through protective barriers, but also to manage the resultant flow of activity.

To start, managers must give hope to isolated curators by introducing them to others similarly placed and to more active colleagues. The isolated must be encouraged so that their collections may be liberated from obscurity and indifference. The potential of their collections should be exposed and nurtured. As museum professionals it is our duty to seek out our colleagues in universities who are single-handedly struggling to preserve and protect collections, rather than waiting for them to come to us.

A neglected collection is like a building in need of conservation. We should regard ourselves as scaffolding to support the collection until it is revitalised sufficiently to contribute to its surrounding community.

Assisting an isolated or neglected collection is a rewarding challenge, and can be a stimulating team effort. It is the reason for the existence of committees of management, networking groups and professional associations. Working together enables maximisation of strengths and opportunities and the counteraction of weaknesses and threats. Curators working alone in 2000 are as eccentric and anachronistic as an author using an old fashioned manual typewriter.

Few employers officially express what should be a universally important mission for the success of any enterprise. That mission is to provide employees with challenging, interesting jobs. From that unstated mission it follows that an employee and the employer must understand the range of the job, which should be detailed in writing. Many curators of university collections have no written statement of their curatorial duties and privileges. I believe it is our responsibility to try to change this situation so curators and others responsible for university collections know that their effort will be properly directed and justly rewarded.

When and where to start

When, where, and how to start? Of these questions, "when" is easiest to answer: at once or as soon as possible. "Where" is also relatively easy: locally, where help is needed, or in response to requests for assistance. People are usually reluctant to ask for assistance until the last moment, so a call for help may be an emergency. The situation may have deteriorated so badly that salvage is a more practical solution than a return to normality. Non-urgent situations provide a better starting point for recovery. There are a number of signs that signal danger for a collection. These include:

- The person who created the collection retires, or the unit closes, leaving no logical successor.

- The space in which the collection is kept is untidy and unattractive to visitors.

- The collection does not have regular access hours.
- No data on usage has been kept or collated.
- The university provides inadequate funds and little or no attempt has been made to raise funds from outside the university.
- Staff have no duty statement or there are no staff.
- No management committee has been established or it has been uninterested and ineffective.
- There are no annual reports.
- There has been little or no advocacy for the collection within the unit or university.
- Links with other institutions and relevant organisations have not been made or maintained.
- The significance of the collection has not been established or recorded at the local, national or international level.
- The collection's current mission, and/or the strategic plan, has not been written or is not aligned with those of the university.
- The needs of the collection have not been communicated to the university's capital management authority.
- Inadequate use is made of the museum.

How to start

The gathering of facts is an important first step when a collection has become neglected and isolated, or has despondent staff. Some basic statistics and information, the sort that are normally found in an annual report, should be compiled. These should include:

- Figures on the funding the museum receives, applications made for outside grants, and recent acquisitions and donations.
- Descriptions of the quality of the accommodation, recent changes and capital management submissions.
- Lists of the people involved in the museum, the hours worked, recent staff development or conferences attended, and recent publications.
- Statistics on visitors and usage of the collections, contributions to teaching and open days and talks to outside groups.
- Brief descriptions of exhibitions.

Facts such as these are the basis for the revitalisation of any collection. They become benchmarks that provide a source of pride in future achievements. They become the basis for future submissions and funding applications. Statistics are useful both within and outside the university.

While the facts are being gathered, the isolated curator should be introduced to, and provided with the means to visit colleagues in similar and better situations. Once facts have been assembled and stakeholders consulted, draft management and strategic plans can be prepared. These should be circulated for comment at departmental and management level, and to curators in various sectors of the museum profession. This has a double benefit: one receives the advice of experience and the proposed revitalisation of the collection is publicised.

A duty statement should be written detailing responsibility for, care of, and access to the collection. It should indicate in broad terms the time to be spent on museum duties and on any non-related duties. It should make provision for communication with colleagues, self-development opportunities and the introduction of new technologies. It should also ensure that work on the collection is taken into account at the various steps in the employee's career path.

Regular organised communications between university curators and others responsible for collections are essential for the well being of both staff and objects. Besides regular meetings between management, departmental staff and curators, it is important that meetings are encouraged between university curators, and between university curators and the curators of other sectors of the

museum profession. One way of achieving this is through professional associations at regional, national or international levels - the various museums associations, councils and committees. But the first step is to organise meetings within the university of its curators and others associated with its various museums. These can be followed by meetings of curators from other universities in the locality.

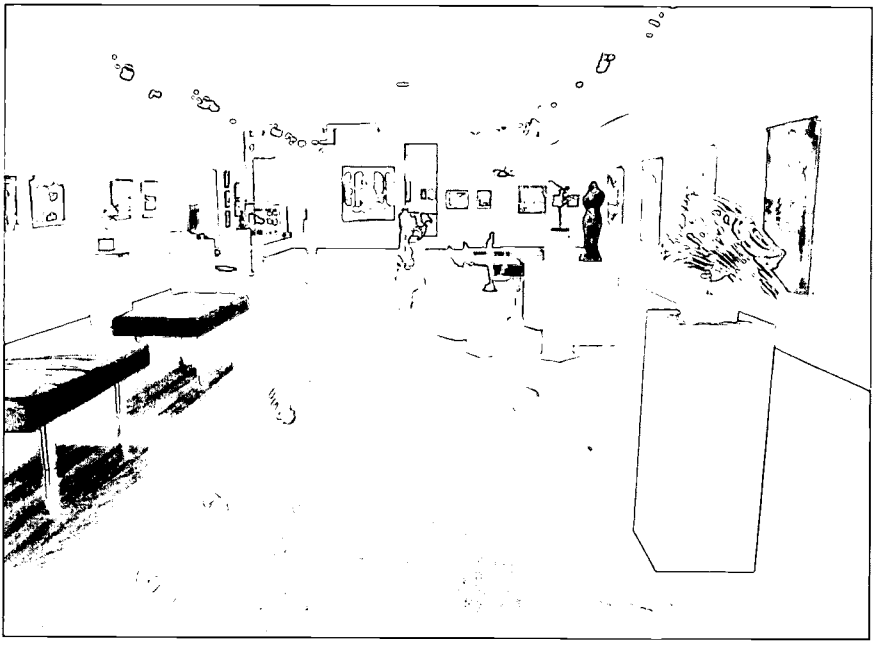
The value of having advocates to speak for the importance of the collection and the ways in which it can be used cannot be overstated. The message needs to be repeated, as memories are short. In this connection it is worth pointing out that applications for funding and fundraising events, even if not successful financially, have other benefits. These include wider political awareness, a raised profile for the collection, increased social interactions and the development of new relationships.

Managers and academic critics of university museums must understand that to attract visitors through the doors university museums must compete with public museums by providing entertainment. University museums are expected to serve a wider range of communities than are other museums, which are less intimately connected with the education of secondary, tertiary and post-graduate students. Other museums are not expected to maintain a cloistered scholarly following while at the same time mounting contemporary exhibitions sufficiently attractive to bring outside people into the strange, unfamiliar territory of the campus. Rather than providing *education* and entertainment, other museums are providing *information* and entertainment.

Some examples from Australia

In 1996 in Australia, the vice-chancellors of the twelve universities in New South Wales and the Australian Capital Territory established a Standing Committee for Museums and Collections with Professor Yerbury, Vice-Chancellor of Macquarie, as Chair. Each vice-chancellor nominates a representative and alternates, who meet formally three times a year at a different campus. At each meeting business is conducted in the morning: this might cover, for example, decisions about co-operative travelling exhibitions, grants for mentorship and research, arrangements for day long staff development

seminars for curators, discussion about collections under threat.[1] In the afternoon, members visit the museums and collections of the host university. The committee obtains working funds by asking each university to contribute from AUD250 to AUD1 000 according to the number of its museums and collections.



Macquarie University: the art gallery with Australian-Czech exhibition

Source: Author.

1. See *Cinderella's Gems* (http://www.all.mq.edu.au/gems/index.htm) for details of a travelling exhibition. For discussion about collections under threat see the brochure *Minimum Maintenance Requirements & Closure and Disposal Procedures* (published by the Standing Committee on Museums and Collections of the New South Wales Vice-Chancellors Conference), and national and international news.

The stimulus to form this standing committee came as the result of the first of two Commonwealth Government reviews of university museums, collections and herbaria (see preceding chapter). The reports of these reviews were *Cinderella Collections* (1996) and *Transforming Cinderella Collections* (1998).[2] The origin of the two reviews can be traced from the formation in 1992 of an Australian-wide group of university curators who called themselves the Council of Australian University Museums and Collections (CAUMAC). CAUMAC lobbied for a review and sought the ear on those who would speak to Ministers. It also holds annual conferences and produces a quarterly newsletter. CAUMAC has received grants from the British Council for speakers from the UK to address annual conferences and visit Australian university museums.

Both CAUMAC and the standing committee have confirmed the value of partnerships. The partnership may be relatively simple such as sharing costs of publicity brochures, posters, souvenirs (low cost items or elegant gifts for distinguished visitors), stalls at open days, speakers' travelling costs and staff development. Alternatively, the partnership may be a long term one for travelling exhibitions, significant research grants, provision of access to combined digital catalogues, production of videos, CD ROMs, DVDs, or the building of web pages with moving images and sound describing ways in which the collections can be used for teaching or research.

An international partnership of university museums was discussed at the 1998 International Council of Museums (ICOM) conference in Melbourne, Australia. As there were already national university museum groups in England, America, Australia and other countries, and conferences devoted to university museums, it seemed that there was potential for an international network. The idea was to assist communication, foster interchange of ideas and speed the progress of better practice. The Internet makes communication much simpler than a few years ago and Macquarie University has assisted international co-operation among university museums by establishing a website to list university museums worldwide.[3] The proposal to form an international committee for university museums and collections was approved by the ICOM executive in mid-2000.

2. The 1998 report is available on the web at: www.amol.org.au/craft/publications/miscarticles/cinderella_contents.asp.

3. Visit http://www.lib.mq.edu.au/mcm/world/ for details.

Conclusion

The IMHE seminar in Paris in September 2000 and those that have proceeded it and will follow are also partnerships; partnerships in which we strive together to protect our moveable heritage, give access to it geared to the needs of users, anticipate the intellectual needs of our visitors, and produce stimulating, visually attractive, innovative exhibitions. Let us work together so that we can look with pride, and others look with wonder, at the life leaping revitalised from university museums.

2.4. A REGIONAL SYSTEM OF UNIVERSITY MUSEUMS

by

Fausto Pugnaloni,[1] Italy

Abstract

The university museum project for the Marche region in Italy takes shape within a national plan to spread and enhance scientific culture. The proposed university museum system will be based on the integration of the prestigious collections belonging to the oldest universities in the country with the resources of the youngest ones, such as the University of Ancona. Ancona has the potential to become a regional centre within this plan. A new site is to be built which will combine the traditional museum collections and the most advanced instruments of multimedia interaction. It will also work as a gallery available to the general public as well as to specialists and researchers, and will host temporary exhibitions, conferences and seminars, and shows. It could become the place for making connections between the scientific world and the general public.

Introduction: The national university museum system

The University of Ancona is promoting a project to create a regional network of university museums co-ordinated by the Instituto di Disegno Architettura e Urbanistica (IDAU). The project is based upon the national plan for re-organising the cultural heritage preserved in university museums, archives, collections and botanical gardens that is being developed by the Rectors' Conference of Italian Universities (CRUI).

---

1. The research team was composed of: Antonello Alici, assistant researcher; Paolo Clini, information drawing technology; Adriana Formato, editing and graphic designer; Anna Paola Pugnaloni, computerised cataloguing systems.

The aims and objectives of CRUI include co-ordinating the national university sector; putting forward policy guidelines for its administration and development; promoting an in-depth evaluation of its problems; acting as its spokesperson; and developing relationships and exchanges with other national and international organisations. Within this role, CRUI has devised a museum project to enhance cultural heritage through the organisation of an integrated university museum system and a national network.

The committee in charge of the CRUI museum project has identified a number of tasks: to disseminate knowledge into society; to promote research and projects which protect the historical, scientific and natural heritage; to co-ordinate the teaching of museum sciences; to plan travelling exhibitions and technical training courses on museology; and to preserve, arrange and increase historical-scientific collections in order to protect and open them to public consultation. These tasks have been conceived on the basis of the important social role played by the university sector's historical-scientific museums. The museums preserve objects collected over the years that, for each specific subject, are testimony of the process by which we have arrived at our present state of knowledge.

The national network

The national network of university museums will co-ordinate a large number of collections and museums, integrating the nationally and internationally prestigious collections of the old universities with the resources and potential of the new. An efficient network is necessary for promoting constant and profitable co-operation and associations between the internal members, and between the members and international agencies and centres. This efficiency is also needed to guarantee the exchange of information with a potentially limitless public regarding the contents of each museum and its cultural initiatives.

The network will provide a national archive or catalogue of the Italian university museum system which will support the development of access to the collections and research at all levels. To reach that point, advanced university structures are required, structures equipped to develop well-planned activity, and to employ and update qualified staff. There will be the need for key centres in charge of documentation, research, and the spread of knowledge and

teaching. These centres will also need to offer services on cataloguing, editing, creating multimedia products, conservation and restoration, and training.

The University of Ancona and the regional project

The University of Ancona joins the national network by planning its own university museum system as a starting point for the creation of a regional key centre. Two local commissions have the task of defining the strategies and the priorities of the regional project. The project is based on the potential dialogue between the traditional museum, with its collections and its usual visitors, and a new form of site-space that is flexible, dynamic and multifunctional. This new space will be called Museo dei Musei. It is at one and the same time a research centre, a museum, a gallery for temporary exhibitions, a conference centre for scientific symposia, a meeting place for special events and a place of fun, open to a wide public.

To achieve our aims we need the support of information technology. The use of virtual reality will widen the visiting experience in the museological structure by giving everyone the chance to organise their personal visit, making connections to the various links provided. In our idea, Museo dei Musei will become a hothouse to enhance scientific research.

We believe that such a place must come out of the university system. Rather than creating a dangerous collision, the interaction between the teaching and research responsibilities of a university and a modern and active museum can bring new life to both. We also believe that the values of a territory, its culture, traditions and society, generate permanent memories that must meet and become part of the university heritage. In our specific case, the territory is the Marche region, characterised by old and new universities covering all the academic disciplines.

In the first stage of the project, we have chosen a symbolically charged site to host a virtual Museo dei Musei. It is the Lazaretto (or Mole Vanvitelliana), a powerful fortress on the waterfront of Ancona, designed as a quarantine station for people and goods by Luigi Vanvitelli and built in 1732-1743. The fortress, with its pentagonal plan and views out to sea, was intended to become a focal point in the urban scene. Over the centuries, Lazaretto has assumed many different faces in order to serve a variety of often extremely different purposes - civil, religious, sanitary, military, industrial - yet always kept its link to the sea.

Today, it can assume a new face as it becomes the Museo dei Musei for the Marche universities.

The regional network aims to protect knowledge by enhancing the history of academic research and at the same time giving information on the modern and contemporary cultural production of Ancona, Camerino, Macerata and Urbino. The starting point is to create the University Museum System (UMS) in the four universities of the region. The UMS will gather the collections in the various faculties - scientific instruments, equipment and specimens, archives and libraries - together with the existing museological structures - the natural sciences museums, the museums of scientific instruments, the botanical gardens and the architectural archives. It will refer to the cultural heritage according to the research areas of art and architecture, science and technology, and medicine and health. At the same time, it will serve to reinvigorate the relationship with the territorial environment, its history, economy and culture, its past, present and future.

This stage will be carried out in each different university through a number of actions. The existing collections and material stored in the faculties, departments, institutes and centres of the four universities must be identified. This material must be organised in proper cultural areas according to the history of the academic discipline. A website - provided by the Museo dei Musei in Ancona - will connect the regional university museum system to the national and international network.

Conclusion

For the next stage, starting in 2001, the physical, as opposed to virtual, Museo dei Musei will be built at its permanent site on an old monastery already owned by the University of Ancona. The site will combine a public area with a research area. It will host the permanent collection of Ancona UMS and provide the regional website.

There will be greater co-operation with the territorial environment by way of the local authorities (regional government, provinces, municipalities in the fields of culture, tourism, educational training and labour), the school system and the Museo Diffuso Marche (a rich network of more than 250 local museums in the region). A national and international research programme on the heritage will be developed with the help of information technologies. The research items

to be covered will be the environment and landscape, sciences, computer science and calculation, medicine and health, work and technology. In the near future, we hope to widen the network, thereby furthering our contact and exchanges with the countries of the Adriatic Sea.

2.5. UNITING FORCES: THE EUROPEAN NETWORK AND NATIONAL COLLABORATIVE PROJECTS

by

Steven W.G. de Clercq, The Netherlands

Abstract

Universities gather objects for academic research and teaching. Over the years these objects can develop into collections and even museums. It is the nature of research that it moves to new fields, inevitably leaving its collections behind. University collections are "incidental" collections. They are kept by bodies that do not regard caring for a collection of primary concern once the collection has lost its academic role nor are they paid for doing so. Because of their vulnerability, a new approach is needed to handle these collections, tailored to their character, composition and origin, with the aim to enhance both use of and access to them. Out of an embarrassment of riches, the notion was born that collaboration (both national and international) is the only way of tackling these problems. This allows for specialisation, the formation of collection profiles and subsequent selection and de-accessioning. The aim is to improve the overall quality of collections through a reduction of sometimes up to 50%. For this purpose, the five "old" Dutch universities have formalised a collaborative project.

Introduction

The fact that we witness an explosion of network activities around university collections and museums suggests that existing structures do not satisfy our

needs. This seems quite astonishing since the museum world has a great number of professional, well-organised networks for virtually every possible theme on the regional as well as on the national and the international level. Why then do we feel we need yet another network? In which way do university or scientific collections differ from the rest of the museum field? Does this difference justify a special position? How should we relate to other, already existing networks? Which are our specific needs? And which are the pit-falls? And, finally, what exactly do we mean by "academic heritage"?

In 1988, some 250 rectors of European universities joined in Bologna to sign the *Magna Charta* of Universities. This "bill of rights" describes the position and the responsibility of universities in our society. The *Magna Charta* is meant as a guideline for universities as well as for their governing bodies. It states that a university is an "... autonomous institution at the heart of society ... [that] produces, examines, appraises and hands down culture by research and teaching." And that universities are "... the trustee of the European humanistic tradition...".[1]

One of the fundamental responsibilities of universities, therefore, is to take care of their cultural heritage, a heritage which is embodied in their collections (the academic heritage). These collections not only reflect scholarly research and teaching, but also age-old academic and scientific traditions. Like the fundamental principle of freedom in research and teaching, they are of invaluable and irreplaceable scientific, historic and cultural significance. There is a growing awareness of the importance to our well being of these irreplaceable goods. Most of these goods, like culture, landscape, nature and the environment, are literally priceless. These goods are extremely vulnerable because our economic models fail to take their values into account. It is our responsibility, as keepers of the academic heritage, to stimulate our universities, and their governing bodies alike, to act as guardians of these cultural goods. Our voices will be better heard when we join forces.

1. References to the *Magna Charta Universitatum* can be found through the pages of the Association of European Universities at www.unige.ch/cre/

The universities' scientific collections

At this point I must draw attention to a remarkable difference between Continental Europe and the UK, the US and Australia. Whereas one hardly ever finds university art museums in Europe, elsewhere a great number of outstanding art museums are run by universities. In the context of this paper I concentrate on European *scientific* university museums. I am using the term "science" in the broad, continental definition of *Wissenschaften*, covering the full spectrum of human knowledge from mathematics to the humanities.

I have also narrowed the definition of academic heritage to university *collections* and not, in this case, buildings, libraries or archives. The academic heritage is of remarkable size, diversity and significance and represents a very special part of our cultural heritage. It is the material archive of the history of research and teaching, and of the scientific and technological developments that shaped our world, as well as their influence on our society and on our natural environment.

Like general museums, scientific university museums care for their collections and serve the public, but, in addition, they are also responsible for collection-related research and teaching. Whereas general collections are usually made up of objects collected for their intrinsic beauty, most scientific collections were, by contrast, amassed for the information they contain. Objects in scientific collections have been collected, or perhaps one should say selected, on the presumption that they contain the answer to a specific scientific question. Questions like: what did the material culture of the people who lived in this site look like (archaeology); what does the magnetic history of this rock sample tell me about the tectonic history of this mountain range (geology/paleomagnetism); what does this tissue tell me about the health condition of this patient (histology/pathology)?

These examples illustrate why the objects were selected, and that they were meant to be studied. It is not the object as such that counts, but the information it contains: the object as a primary source of information. Examination of the object may even lead to its destruction, like the rock sample that had to be demagnetised to reveal its paleomagnetic history. Once the scientist has obtained the desired information his/her interest usually moves on to the next question, which probably means the next object.

It is in this way that in the course of time parts of the collections lose their original function. Some may add up to a reference collection of international importance, whereas others are put aside and moved to a far corner in the attic or the cellar, and gradually get forgotten and neglected. Although we know from experience that is almost impossible to predict if the Prince will ever come along to awaken the Sleeping Beauty, we must be prepared to undertake selection and de-accessioning as an instrument for improving the over-all quality of our collections.

Selection and de-accessioning

So far, I have drawn a generalised picture of the life and fate of scientific collections. In day-to-day practice, however, the story is quite different for each type of collection. Some examples:

- Archaeological sites produce enormous amounts of artefacts, including many "duplicates", notably construction material and household pottery. There is a growing tendency to leave material "in situ" as "soil archive".

- Core-samples from potentially oil or gas bearing sites are kept confidentially.

- Botanists, zoologists and palaeontologists will keep specimens in order to build up a reference collection, which by its nature has a permanent character.

- Medical collections are composed of human remains as well as instruments. Legislation dictates how to handle human remains, whereas most of today's medical instruments are mass-produced disposable items.

The collection policy of general museums aims at adding those objects to the collection which are felt to be missing. Once this object is obtained, it is meant to stay permanently in the collection. De-accessioning, therefore, is an exception in any well-run general museum. By contrast, selection and de-accessioning should be part of the professional practice of curators of scientific collections, who are continuously faced with the question as to which objects or collections should be kept for the future once inquisitiveness has

driven the discoverer to new hunting grounds. In other words we need a policy and guidelines to tell us what to keep from what has been already collected and how to perform de-accessioning. Ideally, selection and subsequent de-accessioning should be the final stage of each research programme. But who will pay for this? When we buy a new refrigerator, part of the price is meant to cover the cost to get rid of the old one. Along that line, it may be good practice to earmark a certain amount of each research budget for this purpose.

After selection and de-accessioning have taken place, what remains of a university collection enters a new phase. What is kept is more than the material archive of research and teaching and the historical record of the university, but also a significant part of our cultural and scientific heritage, and a major source for the study of the history of science. A second, closely related aspect of the new life of university collections is that they are becoming increasingly accessible to a wider public: they are essential for exhibitions mounted by university museums as they serve as a showcase for the university to the outside world. Finally, the renewed use is by no means limited to their role as reference collections, but extends, as a result of new ideas and techniques, into new and hitherto unknown fields of research.

The responsibility of the university

The fundamentally different way of looking at objects in scientific and in general museums has a major impact on the management of the collections, as well as on the status of the collections within the organisation, their legal position and funding, etc. Universities regard research and teaching as their core business. Therefore as long as collections play a role in academic programmes they continue to be part of the day-to-day university business. However, once this role is over and they are no longer regarded as essential assets in these programmes, universities do not seem to mind if old collections are forgotten. It is even questioned whether the archival function of keeping those collections can still be regarded as part of the core business.

On the other hand, universities must remember that having amassed these collections they are responsible for them. After all, these collections, and the data which goes with them, represent an enormous capital investment. A substantial amount of public money has been used to bring these collections together and to study them. Universities should regard it as their public responsibility to increase the profit of the invested capital by, for example,

introducing better and more efficient collections management, and by opening up the collections to a wide range of users.

The vulnerability of the academic heritage is by no means confined to the collections themselves. The position of the staff is another area of weakness or point of concern. We rarely see museological responsibilities, let alone the amount of time to be spent on them, formalised in duty statements. Such statements usually only mention core university tasks. As a result, professional museological training is rarely encouraged and only seldom possible. Furthermore, there is always pressure on the available time and it is by no means evident that the post will be continued after retirement.

A European network for academic heritage

The Council of Europe recently discussed the vulnerable position of scientific collections. In their Recommendation, the Council distinguishes "incidental collections". These are collections "... owned by persons or bodies (like universities) whose main or major activities are in areas other than collecting or caring for collections."[2] Since incidental collections "... are often subject to pressures, which the owner is not able to stand against..." it is recommended that member countries be asked "to implement comprehensive legislation designed to encourage the non-dispersal of selected incidental collections"; and "to establish a general scheme to give assistance ... to owners of collections ... when there is a demonstrated need for this."

The special nature of (historic) scientific collections and their status as incidental collections, lead convincingly to the conclusion that there is much to gain by setting up a Network for the Academic Heritage which concentrates on those fields not shared with the general museum world. Topics to be dealt with by the network should relate directly to these points, and include:

- Legal, institutional and financial issues.
- Position and organisation of university museums within their university.

2. Council of Europe (1998), Recommendation No. 1375, Document 8111, p. 2.

- Status, position, training and career-planning of staff of university collections.

- Archival function: management and use of scientific collections.

- The relationship between scientific collections held by universities and other institutions.

- University museums and their role in the promotion of science.

- Collaboration between university museums.

In making our choice of topics, we must beware of getting involved in areas such as security, fundraising and education which are already covered by other existing professional networks and best discussed in a broader context. We should concentrate on topics that are characteristic for university museums. However, we should not use the idea of a special university museums group as an excuse to stick with our own kind and avoid confrontation with other groups. We should at all cost avoid our network leading to endemism. On the contrary, it should stimulate contacts and co-operation with other museums and museum professionals. Staff should be encouraged to participate actively in such networks. Our network should act as a two-way gate and as a distribution channel between universities and the outside world. All parties will benefit from such an approach.

Because the special character of the academic heritage and its vulnerable position is global, there is much to say in favour of Peter Stanbury's initiative to establish an International Committee for University Museums and Collections within the International Council of Museums (ICOM). There are, however, practical reasons for starting with a regional, in our case European, approach as long as we keep in mind that we will eventually become part of the UNESCO-family. These reasons include the special attention received from the Council of Europe, the fact that it is easier to start working on a smaller scale, and funding facilities like Culture 2000.

The decision to start a European network for the academic heritage was, in fact, the outcome of the workshop on Academic Heritage, Responsibilities and Public Access held at the Martin-Luther University of Halle-Wittenberg (Germany), 14-16 April 2000, where representatives of museums and

collections of several European universities met. They drafted the Declaration of Halle, which reads:

> "Universities must acknowledge their wide cultural roles. Academic collections and museums provide special opportunities for experiencing and participating in the life of the University. These collections serve as active resources for teaching and research as well as unique and irreplaceable historical records. In particular, the collections of the oldest European universities provide windows for the public on the role of the university in helping to define and interpret our cultural identity. By valuing and promoting this shared academic heritage, our institutions demonstrate a commitment to the continued use of these resources by a broad public."

Against this background, it was agreed to found a network which "... is open to interested academic institutions with similar collections and will collaborate closely with other relevant initiatives. The objective of the network is to share knowledge and experience among its members and to undertake joint projects with the aim of enhancing access to the collections at all levels." [3]

Whereas UNESCO is an important partner in the outside world, we must also find an equally important partner within our own academic family. I strongly recommend that the Association of European Universities (known by the initials CRE), which signed the *Magna Charta* of Universities, adopt our initiative. By so doing, they solemnly pledge to act as guardians for the academic heritage.

A national initiative: Netherlands Foundation of Academic Heritage

The Netherlands provides an innovative example of a national collaborative project for university museums. The accumulation of problems around collections, the growing awareness of the significant resources they contain, and the conviction that action had become inevitable, led to a combined initiative on the part of the five "old" universities (Leiden, Groningen, Utrecht, Amsterdam and Delft). They have set up a collaborative project co-ordinated by the

3. The URL for the European Academic Heritage network is www.universeum.de. There is a link to the Halle Declaration text from there.

Landelijke Coördinatie Groep Academisch Erfgoed, which has recently been formalised as the Netherlands Foundation of Academic Heritage. Each participating university is represented by two members, one of whom is a museum professional, the other someone close to the board of the university.

Their first action was to conduct an extensive inventory of the collections in the care of the Dutch universities and related scientific institutions, which confirmed that the academic heritage makes up a significant part of the Collection Netherlands.[4] The majority of the Dutch academic heritage is kept by the five universities together with the national museums in Leiden (see Tables 1 and 2).[5] Many of these collections still serve as active resources for teaching and research and will continue to do so. Furthermore, they act as unique and irreplaceable historical, cultural and scientific records, and contain material of national and international importance. In many cases they are kept under poor conditions and are in need of urgent conservation. Generally, the museological training of personnel lags far behind that of the general museum sector.

The survey also showed that not all collections are of high quality and worth keeping. Also, some collections contain a great number of duplicates. Finally, there are what are termed "orphaned collections": collections of high quality but which have ceased to be used because the research programme has changed or the subject is no longer taught. Although such collections may have become of little value for the faculty, this is by no means a measure of the significance or the quality of the collection itself.

4. "Om het Academisch Erfgoed", 1996, Report and inventory of the Dutch academic heritage made on behalf of the Ministry of Education, Culture and Science. See also the Website "University Museums and Collections Worldwide" by Macquarie University, NSW, Australia (www.lib.mq.edu.au/mcm/world/).

5. The national museums of Antiquities, Anthropology, Naturalis (natural history) and Boerhaave (the history of science and medicine) all originated from collections of Leiden University.

Table 1. **Distribution of ownership of collections in the Netherlands**

Owner / Theme	(Former) national museums	Other national institutions	County and local community	Incidental Collections: universities	companies	private
Art						
Applied art						
History						
Scientific						
Technology						
Libraries						
Archives						
Monuments						

Key =The darker the shading, the more important the collection. On a rough rating scaling, the solid, black square represents a 4-star collection, with the star-rating diminishing as the shading becomes lighter.
Source: Author.

Table 2. **Distribution of ownership of scientific collections in the Netherlands**

Owner / Theme	(Former) national museums	Other national institutions	County and local community	**Incidental collections** Universities	Companies	Private
Anthropology	■	■	■	▒		
Archaeology	■	■	■	■		
Botanical gardens and herbaria				■		
Geology and paleontology	■	■	▒	■	▒	▒
Zoology	■		▒	■		
Medical morphology anatomy-pathology				■		
Medical and dental instruments	■			■		▒
Chemistry				▒		■
Astronomy and physics	■	▒		■		

Key: as for Table 1.
Source: Author.

These observations, in combination with political pressure, and a growing awareness within the universities of their cultural role and their responsibility towards their heritage, have led to the above five universities agreeing the following:

- Collaboration allows the development of collection profiles.
- The overall quality of the collections can and should be improved.
- Improvement can be achieved through selection and disposal.[6]
- The present and future use of the collections can and should be intensified.
- Handing over a collection to a new owner may give it a second life.

A rescue plan was drawn up and in 1996 the Ministry of Education, Culture and Science decided to sponsor this initiative with a one-off budget of 6 million Euro for the period 1997-2000.[7] One million Euro was allotted to each of the five participating universities for the improvement of their own collections with the remaining one million divided among the three nation-wide projects: the botanical gardens, the geological collections and the medical collections.

The botanical gardens

Collaboration on the national level in collections management in this area was not entirely new. For a number of years, both the botanical gardens and the herbaria have tuned their research (and related collection policies) according to

6. "Disposal" is probably best defined as: the permanent removal of an object from a museum's permanent collection, involving the intentional termination of ownership vested in the governing body. "De-accession" is the process that leads to the decision.

7. This grant – which is administered by the Mondriaan Foundation – covers 40% of the total cost; the other 60% is paid by the universities.

regional themes.[8] This makes collaboration easier. All Dutch botanical gardens have joined their collections in the National Plant Collection Foundation. This is a formalised collaboration with each garden taking responsibility for its own collection. It serves as a platform for discussing their collecting policies, their database, the approach of politicians, fundraising, marketing, educational programmes. It also provides a safety net.

The botanical gardens from Amsterdam, Delft, Leiden, Utrecht and Wageningen make up an important part of the National Plant Collection. At an early stage, most of these gardens set up a computerised database for their own collections. These have now become outdated and need to be made compatible both to one another and to the databases of other botanical gardens in the world (for example, through the Internet). Furthermore, as about 30% of their collections consist of annual plants that die off each year, collection management is inefficient and time-consuming. The botanical gardens project group felt that this situation could be improved. It focused on selecting and implementing a common database, which will be available and open to all users including the public.

The concept of sub-collections

Due to the large number of objects, it is very difficult to get a clear picture of most university collections. Therefore, we decided to make inventories of both the medical and the geological collections on a higher level of abstraction: the sub-collection. For this purpose, a database was developed for each type of collection. A sub-collection is a logical, practical, and unambiguously recognisable unit of varying size, sometimes taxonomic, or thematic, sometimes geographic, or referring to its collector.

This concept proved a very useful instrument for collections management especially in our case, where the aim is to improve the overall quality of the collections by looking at them as part of the Collection Netherlands. One of the advantages is that it allows the comparison of similar collections from different

8. Recently, the herbaria from the universities of Leiden, Utrecht and Wageningen have merged into the decentralised National Herbarium Netherlands. The herbaria stay active within their universities with their research and teaching programmes, but they are administered as one organisation with its headquarters based at Leiden University.

localities or universities. This approach allowed us to develop collection profiles for each of the participants and has proven an essential instrument for subsequent selection, de-accessioning, collection mobility and disposal. Furthermore, it has also proved to be very useful in discussions with the national museums, not least in the way it stimulates and structures the debate on future collection policies.

Geological collections

The several million geological objects of the universities of Amsterdam, Delft, Groningen and Utrecht have been classified as 842 sub-collections. General information on each collection, including quality and possible future use, is included in the database, which can be consulted on the website of the museum of the Technical University Delft.[9]

Basically, we distinguish three categories:

1. Sub-collections, which remain in use by the university for education and research.

2. Sub-collections, which no longer play a role in present-day education or research at the university, but which are of such scientific and/or cultural importance that they should be kept as (inter) national Academic Geological Heritage (the orphaned collections).

3. Sub-collections, which do not belong to the National Academic Geological Heritage.

These results have been presented to the boards of the universities involved, with the advice to start an (inter-) national operation to offer unused collections to potential new users. A protocol of de-accessioning describes the lines along which the operation should be performed. All universities involved have authorised the continuation of the project. In early September 2000, the sub-collections mentioned under 2 and 3 above were offered to a selection of universities, museums and geological surveys, both in the Netherlands and abroad. This selection is based on the origin of the sub-collections and the

9. www.museum.tudelft.nl.

character of the institute. So far the Geological Surveys of Indonesia, France and Spain have expressed their interest for material collected during field campaigns in their respective countries. This is an extremely encouraging development and we hope that part of this material will indeed get a second life.

We must remain realistic and face the fact that a great number of collections will not be transferred to a new user. This includes material we judge of little importance. These collections will be disposed of. The major problem which remains to be solved is that of the orphaned collections. We are now discussing this matter with the national museum Naturalis and the Geological Survey and hope to create a National Geological Archive to take care of them.

The academic medical heritage

The medical collections are concentrated in the faculties and academic hospitals of Amsterdam, Groningen, Leiden and Utrecht. Together with the national Museum Boerhaave, these institutions keep the largest and probably most important part of the academic medical heritage of the Netherlands.

A detailed survey was carried out at the sub-collection level, including information relevant for collections management, like size, physical condition, an assessment of the quality of the collections, and of the possibilities of present and future use. All data has been entered in a specially developed database which will eventually be linked to the Internet, allowing museum colleagues from all over the world as well as the public at large to search and use the collections. There are a total of 160 sub-collections, representing well over 100 000 objects, tens of thousands of photographs and documents and some 3 million microscopical slides.

Much attention was given to the quality assessment of the collections. In a number of joint sessions we discussed each of the sub-collections in relation to the comparable collections within the four universities. This helped us to find out which of the collections is the strongest and the most viable, and therefore the most appropriate to be appointed and recognised as the future specialist centre of its field, providing the nucleus for further collecting and other activities. Tables 3 and 4 illustrate the existing and future collection profiles.

Table 3. **Academic Medical Heritage: present collection profiles**

	Leiden	Utrecht	Amsterdam	Groningen
Anaesthesiology		■	■	■
Anatomy	■	■	■	■
Dentistry		■	■	
Dermatology		■	■	■
Images & documentation		■		■
Internal medicine/laboratory		■		■
Obstetrics/ gynaecology		■	■	■
Ophthalmology	■	■	■	■
Oto-rhino-laryngology			■	■
Pathological anatomy	■	■	■	■
Physiology		■	■	■
Radiology		■	■	■
Surgery		■		■

Source: Medische collecties ontleed.[10]

10. "Medische collecties ontleed, instrumenten voor een nationaal collectiebeleid voor het academisch medisch erfgoed" (Medical collections dissected, instruments for a national collection policy for the academical medical heritage); 1999, Internal Report, Ed.: Frank Bergevoet, Instituut Collectie Nederland, Amsterdam & Landelijke Coördinatie Groep Academisch Erfgoed.

Table 4. **Academic Medical Heritage: future collection profiles**

	Leiden	Utrecht	Amsterdam	Groningen
Anaesthesiology			■	■
Anatomy	■	■	■	■
Dentistry		■		
Dermatology		■		
Images & documentation		■		■
Internal medicine/laboratory				■
Obstetrics/gynaecology				■
Ophthalmology		■		
Oto-rhino-laryngology		■		■
Pathological anatomy	■			
Physiology				■
Radiology				
Surgery		■		■

Source: Medische collecties ontleed.

This is the first phase of a larger project that should eventually cover the entire Medical Collection Netherlands. Recently the National Museum Boerhaave agreed to collaborate along these lines. In addition, the Smithsonian Institution in Washington and the Royal College of Surgeons in London has agreed to collaborate in upgrading the medical database.

At present, activities have focused on the implementation of the accepted collection profiles. We are now developing project-proposals to be carried out along these lines. Out of the 160 sub-collections, some 54 need to be upgraded through selection; some eight can be entirely disposed of. In the not too distant future it is likely that some collections will be handed over to a new owner.

Conclusion

There is no doubt that collection management is a time-consuming and costly process. At the same time as we review our collections in the Netherlands we have to cope with all kinds of political, managerial, ethical and legal issues. In many cases we will have to break new ground as there is little or no prior experience on this scale.

Collaboration nationally and at the European level is a challenge. However I am convinced that it is also an opportunity to improve the quality of the academic heritage we keep in trust for future generations.

SECTION 3
PARALLELS AND PARTNERSHIPS WITH PRIVATE BUSINESS

3.1. STRATEGIC PLANNING AND ACTION FOR SUCCESS IN A UNIVERSITY MUSEUM OF NATURAL HISTORY

by
Peter B. Tirrell, United States

Abstract

The Sam Noble Oklahoma Museum of Natural History is one of the foremost university museums in the US. Faced with a grim and uncertain future the museum took a series of strategic steps that have turned into a remarkable success story. The museum identified and assessed its strengths and weaknesses, redefined and repositioned itself, proposed scenarios with appropriate strategies, prioritised realistic action steps, created schedules and budgets, developed scenarios to respond to opportunities and setbacks, and established evaluation criteria. The museum also created a sense of urgency, a powerful planning coalition, and a clear vision. Special programmes were developed to reach out to the public in highly visible and positive ways. Techniques and strategies were borrowed from the business world to illustrate the museum's opportunities and superlative collections. A business plan was crafted to show that the museum had an economic return to the community. In fundraising, the museum formed synergistic partnerships and raised USD 45 million to build a new state-of-the-art facility.

Introduction

Founded over 100 years ago, the Sam Noble Oklahoma Museum of Natural History (SNOMNH), at the University of Oklahoma is one of the finest natural history museums in the United States. On 1 May 2000 a new home for the museum was opened to the public. This is a state-of-the-art, 195 000 square foot facility set in 65 acres of grounds. Funding for this USD 45 million project was

completed through a combination of state, local and private funds. The university also approved a USD 2 million annual appropriation to assist with operations and staffing, and additional in-kind services valued at USD 1 million. Over the past 10 years, staff increased from 28 full-time equivalent (FTE) positions to over 108 FTEs, including 15 PhD-level curators. Since opening, the new museum has attracted over 175 000 visitors, nearly doubling the yearly number of visitors to the old museum. For the first time in its history, the museum can protect the nearly seven million objects, specimens and artefacts in its collections that document Oklahoma's rich heritage. Only 10 years prior to the opening of the new facility, the SNOMNH faced a grim and uncertain future. The university considered the possibility of closing it and warehousing or disbursing its collections. The key to the museum's survival was its ability to deal with change, create a new vision, revise its mission and programmes, and strategically plan, fund, and build a new facility. These activities serve as a model of good practice for other museums.

Challenges and critical needs

University museums of natural history are facing many challenges. The value and relevance of the museums is questioned and their livelihood and existence is threatened. A few have been closed and their collections warehoused or dispersed (Black, 1984). The major issue facing virtually all established natural history museums in the 21st century is the repair and renewal of their physical plants (Goldstein, 1997). At risk are hundreds of millions of anthropological, geological, and biological artefacts and specimens that are of inestimable value. These objects document the diversity and history of life on earth and provide the basis of ongoing research and teaching activities in the world's scientific and cultural communities. Buildings that were grand edifices in the past are now ill suited for present-day needs such as electricity, climate control and computers. Other buildings were never designed to be used by museums. At the University of Oklahoma, for example, nearly 7 million objects representing the state's heritage were housed in aged stables, barns, and wooden barracks that could have been destroyed by tornadoes or fires. The estimated burn down time of these buildings was eight minutes and the roofs, walls and floors leaked. Observations at other major university museums of natural history often show a comparable picture.

In the 1970s and through to the early 1990s, colleges and universities in the US, and in turn, their museums, suffered severe financial pressures. University

administrators made decisions about the most economic use of space (for example, collections space vs. space for an independently funded programme). Too often, the answers were not in the museums' favour and, as a result, many university museums have been in financial trouble for years. University officials zealously cut museum programmes and posts or failed to provide proper housing and support for collections (Davis, 1976). One suggestion was to sell portions of our collections for cash so that we could fix the leaky roofs. We also were told to think about eliminating the public programmes. To further complicate matters, the museums often had to deal with transient administrators that are typical of the career path of today's university president (Mares, 1999). Since 1978, for example, the University of Oklahoma has had six presidents and three interim presidents (average 2.5 years per stay). The administrators ignored the benefits and opportunities that museums provide. For example, museums support first-rate scholarship, increased educational opportunities for students, and outreach programmes throughout the state.

University museums also suffered from shifts in research, teaching, and public interest. Many university museums, founded in the late 1800s, grew enormously in the first half of the 1900s when scientific collecting and taxonomic research were at their height (Braun and Mares, 1991). In the United States, many university museums were also designated as state museums, and they played a leading role in the interpretation of natural history for the community. Habitat dioramas, for example, were instructive and highly popular exhibits of the period.

However as funding shifted from taxon-based subjects, such as systematics, to functional themes, such as behaviour or ecology, the museums were delegated to the fringe of the university's academic interests. In addition, the public's interests and support moved away from static displays such as habitat dioramas to more interactive and hands-on interpretation such as discovery rooms. Viewing dead animals behind glass is a lot less appealing and acceptable now than it was a century ago when the displays had a magnetic and exotic quality.

Most museums were slow to respond to the shift. They were reluctant to scrap or drastically renovate the antiquated dioramas to improve the interpretative interface between the museum and its visitors. Colleagues in public and private museums were openly critical of the role and importance of university museums in documenting, research and interpreting the world's biodiversity (Brown, 1997).

As university museums deteriorated, their institutional value and identity was compromised. Some museums had fragmented pockets of excellent research programmes or educational activities, but many museums lacked a singular vision, direction or purpose (Tirrell, 2000). As discussed by McHugh (1980), university museums had to define their special mission and establish a comprehensive focus and thrust for their actions and resources. These tasks have not been easy. The role of the university museum has not always been clear to administrators, faculty, or even to museum staff and curators themselves (Freedman-Harvey, 1989). The university museums' principal charge was to serve the university community. University museums that failed to meet this charge lost the support of faculty and administrators (Black, 1984). Williams (1969) and Nicholson (1971) pointed out that university museums must serve two masters, the university and the public, whether they want to or not. For example, the university's priorities focus on students, teaching, research, extramural grants, athletics and dissemination of information. The public's interests include exhibits, programmes, and entertainment. Special interest groups may want an attraction that boosts the local economy. Today's museums are schizophrenic agoras: they seek to retain their lofty status and at the same time engage more diverse, larger and novice audiences. Institutions now find themselves forced to reconcile the competing functions of marketing and mission (Schwarzer, 1999).

Museums also face a fundamental challenge of leadership and management. Most museum directors, trained as scientists, are unprepared to deal with the corporate challenges of redefining and reinventing the whole museum. The directors and their staffs struggle to manage the problems, benefit from the successes, create strategies for solutions, and articulate a plan that shows the value of their museums to their superiors and supporters (Tirrell, 2000). Krishtalka and Humphrey (1998) wrote "...directing a natural history museum requires more than common sense and a Ph.D. in palaeontology or ornithology' (p. 35). Museums need a revolution in management culture in order to solve their problems and meet their needs. A few museums, such as the SNOMNH, have successfully articulated a plan, adopted a new management culture, and opened a new facility.

Strategic planning and action for success

The SNOMNH has adopted some common practices from the business world such as strategic planning and business plans to meet its needs. The museum's

road to success has included over 20 years of strategic planning, cagey politicking, and tough marketing and development against nearly overwhelming odds. The key to survival has been the museum's ability to deal with change and to provide a valuable return to its community. The best strategic plan is one that defines the comprehensive focus and thrust of a museum's actions and resources to create its most advantageous position in the future. Strategic planning is an approach that can be specifically tailored to the characteristic and needs of the museum. Ultimately, a strategic plan tells you what you are going to accomplish and how you are going to get there (McHugh, 1980). The SNOMNH took a series of steps that gave it new life and led to great success.

To accomplish its goals and objectives, the museum overcame problems in its past and answered a series of sobering questions about its future, including how to fix crumbling walls and how to position itself in the educational marketplace. We identified and assessed our unique internal and external factors such as our vision, identity, mission, resources, facilities, and governance. By making these assessments, creating flexible plans, and putting them into action, we redefined the museum, illustrated our opportunities, strengthened our position with our academic and lay communities, and competed favourably to gain the desired momentum or result. For example, the museum revised its vision and mission to increase its role in public education. To reposition ourselves, we also proposed scenarios with appropriate strategies, simplified and prioritised realistic action steps, created a schedule and a budget, developed alternative scenarios to respond to opportunities and setbacks, and established benchmarks and evaluation criteria.

Vision and mission control

Strategic planning and change initiatives require a clear vision, a sense of urgency, and a powerful planning coalition (Kotter, 1996). If a museum is to achieve its potential, it will require a clear sense of purpose, as well as a compelling vision for its future. Once articulated, such values can become a powerful tool in the delivery of the strategic plan. We created a unique vision and portrayed a picture of what the museum could be. The museum revised its mission through the early period of its twenty-year effort to obtain a new facility. During this period, it frequently had to justify the value of its mission and activities to the university and to the community at large.

The museum's efforts to reassess its mission, purpose, and future were initiated in 1978 when museum and university administrators hired Craig Black and Harrison Tordoff, a team of professional museum directors, to assess the status of the museum and make recommendations for its future. Of obvious concern were the mission and legal status of the museum (based on an Act of Oklahoma Territorial legislation in 1899), the poor facility, research focus, funding and the need for interpretative programmes. Major recommendations included seeking recognition as the state museum of natural history, obtaining a new facility, centralising the collections and remaining a part of the university to encourage appropriate research. Additional recommendations included an increase in generated income, development of statewide exhibit and educational programmes, and an increase in curators and support staff.

Years later, a statewide poll was taken to ascertain why people supported the proposed funding for the new facility. The number one reason was preservation of the state's heritage. The citizens, like the museum's staff, understood that the collections were at the heart of the museum (Mares and Tirrell, 1998). The recommendations became the basis for long-range strategic plans. In 1987, the director and staff worked with the legislature to pass a bill naming the Oklahoma Museum of Natural History (later renamed Sam Noble Oklahoma Museum of Natural History after the major donor) as the official natural history museum for the state of Oklahoma.

Central to the museum's mission is higher education, and informal education and interpretation. The mission is grounded in scholarship and stewardship. We have a two-pronged, but tightly interwoven, long-range strategic plan to carry out the museum's dual role as both an organised research unit of the university and a state museum (Tirrell, 1998). The plan is to achieve an equally high level of academic excellence and public service to keep the museum in an advantageous position with its two parents, the University of Oklahoma and the state of Oklahoma. The museum is committed to maintaining the highest standards and practices of the profession, including planned and coherent growth, and the development, care and use of the museum's collections while preserving them from deterioration, mismanagement or indiscriminate dispersal. It is clear to the museum, the university, and the state, that the museum must provide educational opportunities and services to a diverse and inclusive audience. It also must collaborate with a wide spectrum of organisations and individuals that contribute to the educational perspective, interpretation, and presentation of the museum's collections and activities.

Institutional positioning

To help redefine and reposition the museum, we initiated a plan of self-study, outside analyses, peer reviews, and accreditation based on professional practices and standards. We took advantage of programmes such as the Museum Assessment Programs (MAP) developed and managed by the American Association of Museums (AAM) and funded by the Institute of Museum and Library Services (IMLS). The MAP programmes provided a series of grants for peer review of general operations (MAP I), collections (MAP II) and public programmes (MAP III). We also benefited from participation in the accreditation programmes of the AAM, a comprehensive peer examination process. The museum was required to meet established standards and practices in many areas such as collections, education, long-range planning, governance, exhibits, financial, security and facilities. With reports from MAP I (1985), MAP II (1988) MAP III (1993), the AAM accreditation process (1972, 1987), and an IMLS General Conservation Survey (1988) we were able to link together a series of impressive case studies that justified our claims for a new museum facility.

In 1987, the university initiated a strategic planning process that prompted a five-year projection of museum goals and objectives, and an analysis of the museum's importance to the university and the state. The goals of the museum were defined as long-range, qualitative levels for research, teaching, collection care and development, exhibits, interpretation and visitor service. The museum's objectives were described as short-range, quantifiable steps articulated as part of a short-term plan of action, or as part of a budget exercise.

In 1993, the museum was selected by AAM to participate in the National Research Demonstration Project, Excellence and Equity: Education and the Public Dimension of Museums. In 1994, another on-site review by an independent consultant assisted the museum with a staff plan for the new museum (Black, 1994). We gained first-hand knowledge of the challenges that other museums were facing by serving as on-site reviewers for the AAM accreditation and MAP programmes. The cumulative findings and recommendations from these activities were essential in creating strategic, long-range plans and instrumental in the decision-making process for planning, designing, developing and building a new museum facility. For example, it became clear that the museum should no longer be pursuing history as a discipline or actively collecting in that area. This function was being fulfilled by the museum's sibling institution, The Oklahoma Historical Society. The

museum also determined to change its name from Stovall Museum of Science and History to a proposed new name, Oklahoma Museum of Natural History which more closely expressed the museum's identity and mission. Concurrently, the museum prepared new documents (for example, collections policy) that were formally approved by the administration and regents of the University of Oklahoma.

Developing a sense of urgency and a powerful planning coalition of stakeholders

The museum had to convince the university's administration, governing body and supporters that their museum faced a real crisis. While staff at the SNOMNH lived through hard times and neglect, they nevertheless carved out niches of opportunity and performed well. However, they often operated independently of centrally determined goals and objectives. It is difficult to create a sufficiently intense sense of urgency about the state of the organisation as a whole when isolated segments of it are operating successfully. Staff created habits of interaction and programming that they were reluctant to change. The staff themselves had to be convinced that a new museum was feasible. Some felt threatened by the planning process and others thought it was a waste of time (for example, "I don't want people planning, I want them doing something!"). A few attempted to control the process ("We don't have time to plan.") and a few confused financial planning with strategic planning. As indicated by McHugh (1980), budgets are not plans, nor strategies to achieve them. In order to jump start this motive, we posed a series of questions such as "What will happen to the museum if it just continues on its current path?", "How can we protect our heritage?", "What will we leave to the next generation of Oklahomans?" The staff, faculty, and the university community were shocked into more decisive and timely responses to issues raised in the initial stages of planning.

Personalising the crisis was the key strategy to success for Oklahoma. We convinced people that their support would make a difference in the museum's future. We had very poor facilities. One strategy we used was behind-the-scenes tours of collections for university administrators, VIPs, local officials, supporters, and thousands of private citizens. Many of them became visibly upset after viewing the horrible storage conditions. They did not want to lose their treasures. Politicians, education officials, and business and civic leaders took notice and were galvanised into action. The museum director wrote a book called *Heritage at Risk* that portrayed the beauty and significance of the

collections and illustrated the disastrous storage conditions. The book was given to politicians, education officials, and business leaders throughout the state. Our cause became the cause of the electorate and their officials. As the idea for a new museum gathered momentum, it became the people's museum, and university administrators and politicians ignored the popular project at their peril.

Members of the local community helped bring attention to the museum. One budding television personality created a film documenting the museum's facilities, and succeeded in having it regularly televised. Concerned viewers quickly volunteered to help the museum. As the museum gained more media attention, members of the university community saw opportunities to provide their students with a unique experience that also helped the museum. Students from the Journalism School were assigned to write stories about the museum's activities, collections, curators, and plans. Teams of students from the Business School assisted museum staff in preparing business and marketing plans. They established contacts with local businesses that were valuable to the museum when fundraising began for the new facility.

It was important to remind everyone that museums are complex, collection-based educational institutions, not simply attractive buildings or beautiful exhibits. Function before form was critical to the design of the new SNOMNH. In revising its mission, developing its long-range strategic plan, and raising funds for a new facility, we engaged a wide and diverse spectrum of our community. We worked directly with various offices and professionals (*e.g.* Office of Development) to plan the building and to raise the funds. We had formal input from Native American tribes, the State Archaeologist, and the Norman Chamber of Commerce. The museum's progress was intensively monitored and evaluated by many formally organised groups.

The Museum Planning Committee (chaired by the university provost and comprised of citizens, politicians, museum professionals and members of the faculty) was responsible for overseeing the development of the new facility. Working with university officials, the director and his staff prepared a unified funding proposal for the building and budget package for permanent operations. The support was based on answers to questions about realistic university support, in-kind services, revenues and anticipated expenses. Early in the planning of the building, special efforts were made to educate and inform local politicians so that the museum became a common cause, not a point of political debate. Various local citizens' committees formed to give advice on the

development of the new museum. One recurring theme was that the citizens of Oklahoma wanted a first-rate facility that would provide a venue for their special occasions. In response, we designed the museum to be a centre of community involvement and activity. We also developed a carefully conceived plan for special event use and space rental. Each group that hosts an event in the facility introduces a new constituency to the university and to the museum.

Fundraising

To raise funds for the new facility and its programmes, we formed synergistic partnerships with politicians, business people, civic organisations, and special interest groups. University and museum officials worked hand-in-hand to form a campaign council, train volunteers, and develop fundraising strategies and activities. In 1991, two local grassroots organisations, Heritage at Risk and Citizens for the Museum, arose spontaneously in support of the museum's efforts. The Heritage group petitioned the Norman City Council to schedule a general bond election for USD 5 million to initiate a fundraising drive. The citizens group obtained a professional campaign co-ordinator to steer the bond bill to successful passage. The bond passed with a wide margin and we had our first USD 5 million. As a result, the university's Board of Regents agreed to go forward with additional fundraising. In 1992, they approved a plan for a USD 37.5 million new facility and a USD 5 million endowment.

Later that year, university and museum officials worked with state legislators and the local organisations to obtain 15 million for the museum through passage of a statewide bond issue for general higher education. A private donor stepped forward and a further 10 million was received – at that time the largest donation in the history of the university. The Chamber of Commerce adopted the museum as its special project. As the project gathered momentum, business and civic leaders worked together to support the museum. Teams of staff and campaign volunteers (many university alumni) were organised and trained to initiate local funding drives in 25 communities statewide. By 1996, we had an additional 20 million from private sources and construction for the new facility was underway. Fundraising for the new facility and initial exhibits was completed in October 1996.

In 1996, the museum was fortunate to gain the support of a new university president. David Boren, a former Governor of Oklahoma and US Senator, had a deep sense of heritage. He recognised the museum's potential. He increased the

money available for the new museum, garnered additional state support for personnel and operating budgets, and assisted the project in every way possible. He understood that the new museum would protect his heritage and be an excellent addition to the university community. He could use it as a tool to recruit students and staff, raise private donations, and show the best public face of the university.

Outreach to establish popular support

One of the most successful strategies for the SNOMNH was to reach out to our public in highly visible and positive ways to develop a popular constituency. The museum's decision to develop a travelling exhibit programme was the result of careful strategic planning (Tirrell, 1991). The rationale for the programme was that it presented the best strategy for addressing the internal (for example, limited exhibit space) and the external factors (for example, potential audiences).

Outreach appealed to funding sources, and provided tangible results and opportunities for co-operative efforts with constituents such as Native Americans. The programmes took sophisticated, object oriented, travelling exhibits to nearly every town in the state. Over a 20-year period, more than 2.2 million people in Oklahoma viewed excellent exhibits that were provided at almost no cost. With a series of small grants, we fielded a programme that has now opened in more than 500 sites in the state - in museums, banks, schools, cultural and civic centres, shopping malls, and libraries. By popular demand, the exhibits have had numerous showings in 17 additional states in the region and as far away as Maryland, Montana, Virginia and Canada.

Business plan

Museums are not businesses any more than universities are businesses. However, the SNOMNH adapted several business practices and techniques to its benefit. A highly successful strategy was a written business plan. We illustrated this with our popular programmes, our service to the community and our superlative collections. The business plan provides a useful format that is understood by the major donors; typically corporate trained professionals not familiar with museums. We showed the value and relevance of the museum. For example, most people, including those at the university, did not know that

museum curators, graduate students, and staff published more than 1 400 scientific articles, books, and monographs. Annually, they taught 23 formal classes such as ornithology, herpetology and ecology to university students. In the past two decades, the curators and staff received grant awards of more than USD 2 million from prestigious sources such as the National Geographic Society, the National Science Foundation, and the Howard Hughes Medical Institute. The citizenry also were unaware that nearly seven million objects were in the museum collections. Included in these collections were 25 000 vertebrate fossils (the 10th largest collection in the country) and three million archaeological specimens, including those from the world renowned Spiro Mounds. The ethnology collection is the largest in the state and features 8 500 items that directly relate to Oklahoma's Native American Tribes (8% of the population).

We also illustrated the museum's opportunities and potential. We used four basic elements that make business plans successful (Abrams, 1993):

1. *Something new!* The SNOMNH's new exhibits were designed to showcase specimens and artefacts never seen before (for example the world's largest Apatosaurus at 94 feet in length that had been stranded in storage for nearly 50 years).

2. *Something better!* The new facility provided 195 000 sq. ft. of state-of-the-art space to protect nearly 7 million objects of Oklahoma's rich heritage (for example nearly 45 000 sq. ft. for exhibits, 10x the amount in the old facility).

3. *Increased integration!* The outreach programmes in rural and inner-city areas introduced a fascinating array of real objects from museum collections to students and visitors (for example complex concepts such as biodiversity and extinction can be made clear).

4. *Serving an underserved market!* Museum staff increased services by working with minority audiences (for example our Native American Advisory Committee assisted in planning our cultural exhibits).

The museum's business plan was the key to obtaining 2 million in annual appropriations from the Oklahoma State Board of Higher Education (SBHE). Without this support, the museum would have difficulty meeting its mission.

We were able to create a proposal that had a solid concept, a market for services, and a realistic budget. The plan was specifically designed to appeal to the educational mission of the SBHE. It showed how the appropriations had an important and immediate impact on the development of the museum (*e.g.* the first three years of the appropriation were designated for initial exhibits and permanent funding for operations and staff).

The plan is a convincing document showing tangible value, or a "return", to the university and the community. The SNOMNH is now at the forefront of the university through activities such as exhibits, state-wide outreach, cutting edge research, core teaching, graduate studies, VIP tours and support for ethnic studies such as the Oklahoma University Native American Studies Programs. The administration is convinced that the new SNOMNH facility is a valuable asset for recruiting faculty and students, attracting donors, hosting conferences, special events, and receptions and tours for VIPs. The business community sees the SNOMNH as an attraction with a projected economic return of 3.4 million annually (based on our projected attendance of 300 000).

Maintaining the management culture

The Sam Noble Oklahoma Museum of Natural History faced a crisis but it is now poised in the most favourable position of its 100-year history. The financial contributions by the university, the citizens of Oklahoma, and private and corporate donors demonstrate that the museum has an important mission and that it plays a significant role in the scientific and cultural life of Oklahoma and the university. With its new facility, the SNOMNH will achieve its inseparable dual mission as the museum of natural history for the state of Oklahoma and an organised teaching and research unit of the University of Oklahoma.

Conclusion

Other university museums are facing a crisis. Are they beset by problems and failing facilities, or are they facing, as one wag put it, insurmountable opportunities? Is a crisis needed before they revolutionise planning and management practices to succeed in the museum business? I am reminded of words that I heard in a planning meeting "Can't you just work with a bad plan?" The answer is a resounding no! The SNOMNH did not achieve its new facility with a bad plan, but the best strategic plan, tailored to its needs and opportunities. I appreciate the business practices and techniques that were used

to save the museum. However, strategic planning and management is an ongoing, evolutionary practice, not a one-time deal. The SNOMNH cannot revel in its temporary success, it must continue to plan and seek new horizons. University museums seek new ways of doing the business that they do best: research, teaching, and interpretation, all based on collections of objects and artefacts. They and their parents need to work together to redefine and reposition themselves, develop their constituencies, and develop ongoing strategies to build new facilities. Museums and their universities must develop a long-term strategy that calls on the people for support.

REFERENCES

ABRAMS, R.M. (1993), *The Successful Business Plan*, The Oasis Press, Grants Pass, Oregon, USA.

BLACK, C.C. (1984), "Dilemma for campus museums: open door or ivory tower?", *Museum Studies Journal*, Vol. 1, No. 4, pp. 20-23.

BLACK, C.C. (1994), *Staff Plan for the Oklahoma Museum of Natural History*, Unpublished.

BLACK, C.C. and Tordoff, M.B. (1980), *Evaluation Report: Stovall Museum*, Unpublished.

BRAUN, J.K. and MARES, M.A. (1991), "Natural history museums: working toward the development of a conservation ethic", in M.A. Mares and D.J. Schmidly (eds.), *Latin American Mammalogy: History, Biodiversity, and Conservation,* University of Oklahoma Press, Norman, Oklahoma, USA, pp. 431-454.

BROWN, E. (1997), "Toward a natural history museum for the 21st century: catalogue of change", *Museum News*, Vol. 76, No. 6, pp. 39-40.

DAVIS, G. (1976), "Financial problems facing college and university museums", *Curator*, Vol. 19, pp. 116-122.

FREEDMAN-HARVEY, G. (1989), "University museums and accreditation", *ACUMG Newsletter*, Vol. 6, No. 1, pp. 5-7.

GOLDSTEIN, K.L. (1997), "Toward a natural history for the 21st century: funding", *Museum News*, Vol. 76, No. 6, pp. 46-47.

KOTTER. J. (1996), *Leading Change*, Harvard Business School Press, Boston, MA, USA.

KRISHTALKA, L. and HUMPHREY, P.S. (1998), "Fiddling while the planet burns: the challenge for U.S. natural history museums", *Museum News*, Vol. 77, No. 2, pp. 29, 31, 33, 35.

MARES, M.A. (1988), *Heritage at Risk,* The Oklahoma Museum of Natural History, Norman, Oklahoma, USA.

MARES, M.A. (1999), "Bureaucrats pose threats to museums", *Nature,* 400, p. 707.

MARES, M.A. and P.B. TIRRELL (1998), "The importance of university-based natural history museums", *Museum News*, Vol. 77, No. 2, pp. 7, 61, 62, 65.

MCHUGH, A. (1980), "Strategic planning for museums", *Museum News*, Vol. 58, No. 6, pp. 23-29.

NICHOLSON, T.D. (1971), "A question of function", *Curator*, Vol. 14, pp. 7-10.

SCHWARZER, M. (1999), "Schizophrenic agora: mission, market, and the multi-tasking museum", *Museum News*, Vol. 78, No. 6, pp. 40-47.

TIRRELL, P.B. (1991), "Traveling exhibits as a strategy for university-state museums of natural history", in P.S. Cato and C. Jones (eds.), *Natural History Museums: Directions for Growth* Texas Tech University Lubbock, Texas, USA, pp. 159-170.

TIRRELL, P.B. (1998), "Oklahoma Museum of Natural History", *Museum Mission Statements: Building a Distinct Identity*, American Association of Museums, Washington DC, USA, pp. 109-112.

TIRRELL, P.B. (2000), "Dealing with change: university museums of natural history in the United States", *Museum International*, Vol. 52, No. 3, pp. 15-20.

WILLIAMS, S. (1969), "A university museum today", *Curator*, Vol. 12, pp. 293-306.

3.2. A PUBLIC-ORIENTED AND EDUCATIONAL MUSEUM

by
Peter de Haan, The Netherlands

Abstract

Like any other museum, the main responsibilities of the Utrecht University Museum are to care for its collections and to care for its visitors. As a company museum, the museum is a showcase for Utrecht University. Its objective is to convey knowledge to a broad public through exhibitions and educational activities, and to galvanise the public about science in Utrecht. The museum collects and manages objects of academic heritage originating from the research and education of the university. In itself, this does not yield a distinctive profile. In view of the people, resources and space available at the museum, and the desire to establish a name within the university, city and museum sector, distinctive profiling is necessary as a basis for decision making. In December 1999, the museum formulated a new mission and strategy in a business plan, thus creating a framework for policy and organisational structure in terms of finance, personnel and collection content. The museum would like to distinguish itself by having a visitor-focus, providing education to different target groups, and presenting current and past developments in science in Utrecht as a story and within a context.

Introduction

Established in 1636, Utrecht University is one of the oldest universities in the Netherlands and the largest in the country. The particular responsibility of the Utrecht University Museum is to serve as a centre of expertise that professionally manages the academic history collection of the university, and demonstrates the achievements of Utrecht science, both past and present, to a broad public. In other words, it is the showcase of Utrecht University. In

addition, the museum manages the collections of the Utrecht Academic Medical Centre, as well as those of Dutch professional organisations for dentistry, veterinarian medicine and ophthalmology. It also manages the collections from Utrecht student and faculty clubs.

In 1996 the museum moved to a grand, partially new museum complex in the centre of the medieval part of Utrecht. This building, the former Botanical Laboratory that features the lovely old Hortus Botanicus museum garden, is situated in what is known as the Utrecht Museum Quarter. It was soon evident that the existing organisational structure and working practices did not adequately serve the new situation and new ambitions of the museum. The financial assumptions also proved incorrect. As a result the museum experienced a period of stagnation rather than the expected one of growth. In 1998 and 1999, new management comprising a new director and three new heads of department headed up efforts to develop a new strategy for the museum. In December 1999, the strategy was set down in a business plan.

Preparing the business plan for the University Museum

SWOT-analysis revealed that because of its many different tasks and positions the museum had an unclear and even ambivalent profile. As a narrowly defined university museum *and* a science museum for a broad public, the museum manages a huge historical legacy. It also wants to make presentations that will inform the public and show them the wonders of science. To put people and resources to most effective use and to make the museum better known in a wider circle, management opted to focus on the museum's position as a public-oriented, educational science museum. Enhancing the museum's reputation means presenting a sharper, more distinctive profile.

Within the museum, we had talked about the ideas of "looking over the shoulder of science" and "science is people work". We want to introduce the public to developments in science in an active way that arouses their curiosity and amazes them, so that they start to grasp the changing, new possibilities and achievements of each historic period. We hope to promote an understanding of and insight into the impact of science on our own lives and world by placing contemporary science in a historical perspective and a social context. In short, the Utrecht University Museum is looking to distinguish itself by being a public-oriented, educational science museum, with presentations structured around themes and stories, and with a high quality of building set in an

outstanding garden, in harmony with its surroundings. This would also enable the museum to help Utrecht University achieve its own objective of providing information to the public about science.

Utrecht University Museum, Netherlands

Source: Author.

However, because of the priority given to the public role, the museum must significantly limit its activities when it comes to assembling, managing and researching the Utrecht collections. This does not detract from the fact that we want to maintain a full range of Utrecht's scientific collections. Therefore, in addition to eliminating large parts of the collection through de-accessioning, that could also mean having a limited acquisition policy to fill any lacunae in the collection.

Strategic issues

In the period covered by the 2000-2004 business plan the following strategic issues will determine our direction:

- Strengthening the public and educational character of the Utrecht University Museum, to achieve 40-50 000 visitors a year, nearly twice the number of visitors that currently come.

- Reinforcing public relations and marketing in partnership with others from the Utrecht Museum Quarter.

- Observing a policy of collection, selection and elimination in the framework of the new collection plan.

- Reducing in-house scientific research and reinforcing partnerships within Utrecht University for these activities.

- Making a closer connection with the strategic goals of the university's teaching and research programmes in order to establish a stronger institutional role for the presentation and management of the collections.

- Enhancing collaboration within the Utrecht Museum Quarter in terms of exhibition content and offering special group programmes combining visits to different museums.

To achieve these, certain preconditions need to be met. We must have a stimulating and professional personnel policy; professional maintenance and management of the collections; and an enterprising, customer-focused business approach that stays within budget.

Increasing the audience

By the end of 2004, we want to see a 100% increase in guests through a combination of renewing and reinforcing existing products, selecting various key activities and developing several new products for new target groups. A few examples of these are:

- *The Youth Lab.* Started in 1999 this uses the wonder of science as a basis for teaching children of 10 to 14 years of age genuinely interactive knowledge about science. The Youth Lab will remain a spearhead of our educational policy and will be expanded further. Co-operation with Utrecht teacher training programmes and schools will remain an important on-going element and will also be expanded further.

- *The old Hortus Museum Garden.* This will be used more often for small presentations and activities, particularly related to the zoology and geology collections.

- *The permanent displays.* These are situated in the main hall of the museum and, purely in terms of the objects contained there, no longer meet our standards. They are to be changed in 2001 to become a more interactive, story-telling, thematically structured exhibition.

- *Small events, exhibitions and educational activities.* More of these are to be organised: tours, demonstrations and lectures during holidays and weekends, artists experimenting with the theme of "arts and sciences".

- *15 to 18 year olds.* A new product will be developed in the year 2000 for this group. Crucial to this is co-operation with schools in the region.

- *The Museum Quarter.* Together with other partners in the Utrecht Museum Quarter, we are working on new arrangements. We wish to offer a package combining some form of entertainment at another venue, a walking or boat tour, and a reception and tour or activity in the museum.

- *Contemporary science translated for a broad public.* With the faculties of Utrecht University, we would like to tie-in presentations at the museum with interesting recent scientific developments that are worth presenting. Guest curators from the faculties will be expected to provide assistance. We hope that these activities will also serve the Utrecht University Strategy

Programme. Our objectives are to inform the public about the quality of the university and enhance public understanding of scientific achievement at the university.

Marketing

The activities mentioned above require a good, well structured marketing and public relations programme in order to attract visitors. Without this the new target groups will not be reached and the new products will not be successful. Until recently, like many other museums, this element escaped our attention almost completely. The resources available for marketing are limited, so we have to work very efficiently. We must undertake target group research and analysis in the collective marketing of the Utrecht Museum Quarter, with well-organised free publicity, targeted mailings to schools and agencies, and advertisements in selected media. Within this framework, a new name for the Utrecht University Museum is being chosen that better fits the new profile and that is more user-friendly than the current name.

The web site plays a role in public relations and marketing and, to an increasing degree, in education, but it is also a separate, virtual exhibition and tool for making the collections accessible. The site, already of quite high quality, is to be further expanded in the year 2000.

Co-operation

Co-operation has already been mentioned: as part of the business plan, we want to consolidate and enhance the museum's position in the cultural network of the city and the museum sector, and within Utrecht University. This will be achieved through open, active co-operation with partners in the Utrecht Museum Quarter: for example, by jointly offering Utrecht primary schools a structured education programme through the museums. The guiding premise is that museums can provide a part of children's education and that they can reduce some of the pressure on schools.

We are also talking with colleagues throughout the country about co-ordinating collection policy and management, and about exchanging exhibitions. Within Utrecht University, co-operation is achieved through specific presentations and collection management serving the faculties.

The collections

The academic legacy we collect and manage primarily serves the exhibitions and the educational work mentioned above. In addition, the collections have an archiving function and are used as a historical source.

Utrecht University Museum now curates a collection of around 500 000 objects: collections of scientific and medical instruments, medical preparations and models; objects from the history of Utrecht University and the Utrecht student life; and natural history collections from zoology, geology and palaeontology. We indirectly manage about the same number of objects for the faculties of Utrecht University. In terms of the size of its collection, Utrecht University Museum is one of the largest museums in the country.

This collection is much too large for us to manage professionally. Due to our limited size and resources, we must follow a strict selection procedure to get and keep collections that are manageable and preservable. Parts of the collections will be transferred for management elsewhere. The huge backlog of registrations afflicting some collections to this day reinforces the need, on the one hand, for selection and elimination and, on the other, makes this process even more complicated.

As the museum of the University of Utrecht, we only collect high-value, relevant Utrecht academic historic items. In view of the museum's new profile, the presentation potential and educational value of objects are of primary importance and we must know the story behind an object and the social context in which it was used before we make any decision about acquiring it.

The ultimate objective is to define a core collection of about 20-30 000 pieces. Every item in this collection is to be fully registered, displayed often or sent out on loan, and the top 500 are to be shown in the Virtual University Museum. A second category of pieces is to be registered as items forming part of a sub-collection (a less detailed form of registration). No in-house research into them will be done. A third category of pieces, expected to be some 50% of the collection, will be de-accessioned. This will be a very careful process under the guidance of the Dutch Museum Society.

From now on, our own scientific work will be limited because of the status of the collections, as well as the position of the museum. A limited number of research projects will be undertaken in the future, but otherwise, relevant

research will be connected with (external) projects and the institutes of Utrecht University. Studies in which we still participate must somehow lead to a distinctive, concrete public activity for the museum (for example, publication, lecture, exhibition).

Professional preservation and management of the collections is important and this is where the museum has the most catching up to do in the period ahead. The situation is so severe that we were forced in early 2000 to embark on eliminating the first pieces from the collection and taking on the registration backlog. The collection registration will subsequently be reorganised in a project-based fashion over the next five years and a large number of extra preservation and management projects are to be conducted, financed in part externally through an extra government subsidy.

We have to achieve efficient co-ordination between the University Library and the Utrecht Archive to manage the museum's archive and bibliographic material. We now feel that this material should be managed by the agencies best equipped to do so. The University Museum, as a professional museum, will manage the actual objects.

Personnel and organisation

The choice to reinforce the public and educational character has consequences for the personnel and organisational structure. A shift within the personnel will take place with more jobs and areas of responsibilities being related to the public and to education. The exhibition staff and education personnel and receptionists will be expanded and professionalised. All members of staff will also conduct activities for visitors on a regular basis: the employee running the museum storeroom will give tours of the depots, the curator will talk about the showpiece of the month, another member of staff will host an event. This process is to be supported by relevant expert guidance. At the same time, we will work on developing a customer-focused, flexible, enterprising attitude. Extra staff and resources will also be deployed for further computerisation within the museum. This will cover office automation, the website, the Virtual Museum and computer registration of the collections.

Given our limited resources, the shifts mentioned above can only be achieved if less emphasis is placed on other functions and tasks. For instance, reducing in-house research work will lead to a reduction in the number of curatorial staff.

Where necessary, there will also be staff reductions in other sections of the organisation. The basic staff of the museum is to be kept as "lean" as possible, and is to be added to as follows: financial space has been created in the budget to hire extra personnel on a temporary basis for special projects (guest curators), peak periods, etc. In addition, the volunteers, interns and people with a different type of employment contract will continue to play an important role: tending the garden, giving tours, supervising the Youth Lab and the like would be impossible without them.

Resource needs

Increased resources are needed. We hope for both an increase in the basic funding received from Utrecht University, and an increase in our own self-generated revenue. Our budget for 2000-2004 is based on a 10% increase in our basic funding (NLG 250 000). Through the projected doubling of the number of visitors and a possible entrance fee increase, receipts from the door will increase. The museum shop will also be made more appealing to entice visitors to make more purchases. Receptions and museum leasing are to play an important part. The interest shown last year was great enough for us to expect to be able to achieve that growth.

The basic funding provided by Utrecht University, as well as our own resources, are utilised to perform the core tasks of the museum. Extra activities will be performed using other resources. For example, outside financiers will be sought for the changing exhibitions and to rearrange the permanent collection. Outside financing is going to be used, as well, for part of the work to catch up on the backlog of preservation and registration of the collection.

In the next few years, we will still be operating at a loss. We expect to start breaking even in 2002/2003, and after that, we will operate within the budget and even create some reserves. The break-even point can be expressed through the following parameters that are also used by the Dutch Ministry of Education, Culture and Sciences. The subsidy (basic funding from Utrecht University) for each visitor to the museum will decrease in the next few years from NLG 80 to 40. The contribution made by the public (entrance tickets for individual visitors and receptions) will grow from 5% to 10%. The figures for comparable museums in the Netherlands are NLG 122 and 3%, respectively.

Conclusion

Experience and results from January 1999-June 2000 show that our new policy works:

- During this period, we received about 30% more visitors.
- The Youth Lab concept is innovative and successful, but also very labour-intensive; co-operation with the schools and teacher training programmes works well.
- The combination of the museum and old Hortus Museum Garden is indeed a unique selling point.
- We received a great deal of attention and goodwill, enhanced by successful leasing arrangements and receptions.
- The extra projects for collection management have been approved and are in progress; the project-based approach works well.
- The new collection plan does make choices possible, no matter how painful these choices may be.
- The new organisational structure "works".

However, not all has gone to plan. There is intense work pressure in the organisation, which results in added stress. The whole operation is basically a reorganisation, both in terms of the content of the museum and its management. A few employees have abandoned ship. Others have become even more enthusiastic, but this enthusiasm has to be continually fuelled.

The legitimation of the museum remains a sore point: we perform a non-primary, *i.e.* "luxury" task for Utrecht University. It remains important to link the primary functions of the university with the museum tasks and to emphasise our own position.

Things do not always go right the first time and that often means disappointment and uncertainty. Continuing to provide direction, carefully guiding the process, making choices, planning, co-operating and

communicating are the elements that determine success – just as in any business. But we know what we want to be and the position that we would like to strengthen. We want to be a public-oriented, educational museum that tells stories and raises questions about science of the past and of today. Our work so far suggests that we are well on the way to achieving this.

3.3. FUNDING AND PUBLIC ACCESS THROUGH PARTNERSHIP WITH BUSINESS

by

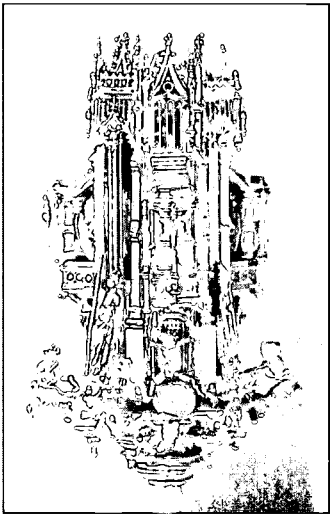
Ian Carradice, Scotland

Abstract

In July 2000 the University of St Andrews Museum was set to open in The Gateway – a new GBP 8.5m development at the entrance to the historic town of St Andrews. The Gateway was to include also a university information centre, a conference centre, and a private leisure club with views over the Old Course of St Andrews, the most famous golf course in the world. The museum had three main purposes: to put on public display the collections of Scotland's oldest university; to tell the history of the university; and to provide a new educational resource for the university and local community. The building was to be staffed and maintained by the operating company with the collections remaining the property and responsibility of the university. This would have represented an innovative partnership between a publicly funded university and a commercial company. Various issues arose from this proposed partnership, both practical and ethical: the dynamics of the partnership; the commercialisation of historic collections; intellectual control; the cost of public access; security and insurance. In June 2000 the company went into voluntary receivership and, at the time of writing, the museum project remains on hold.

Introduction

The University of St Andrews has been accumulating collections ever since its foundation in the early 15th century.[1] From time to time some of its collections have been used in teaching; at times they have also been shown to the visiting public. The university recognises that it holds important collections, including items of national and even international importance. The university accepts its responsibility to look after these collections, but it has limited resources for doing this. The cheapest way to care for collections is to lock them away. Putting them on public display, whether temporarily or permanently, costs much more, so why should a university bother to take on these extra costs and responsibilities? This paper describes how the University of St Andrews attempted to increase public access to its museum collections without incurring significant extra costs.



Head of the mace of St Salvator's College, commissioned by the founder bishop James Kennedy, and made in Paris, 1461.

Source: University of St Andrews

1. St Andrews was Scotland's first university, and the third founded in the British Isles. Teaching began in 1410; full university status was obtained in 1413, with the signing of the Bull of Foundation by Pope Benedict XIII. For the history of the university see Cant, R.G. (1992), *The University of St Andrews. A Short History* (3rd ed.), University Library, St Andrews, Scotland.

Why display collections?

The earliest recorded guided visits to the historic collections of the University of St Andrews date from the second half of the 17th century, when English tourists noted being shown the university's mediaeval maces and its finest scientific instruments.[2] In the 18th century the university's archery medals were also displayed to visitors in the colleges and in the university library a selection of curiosities were put on display. This was early cultural tourism. It was restricted to an upper class, intellectual elite. Two well-known visitors to the University of St Andrews were Samuel Johnson and James Boswell.[3] The university was willing to admit visitors and guide them round its treasures in order to show off its antiquity.

Cultural tourism continued in the 19th century and expanded greatly after the arrival of the railway to St Andrews. Day excursionists could now visit St Andrews and its university. One of the attractions they were recommended to visit was the new museum jointly run by the university and the Literary and Philosophical Society of St Andrews, founded in 1838. This was largely a natural history museum, though it also contained archaeological and ethnographic collections.[4] It was also used by the university for teaching purposes. Visitors, called "strangers", were charged admission. When the Society died out the university assumed sole responsibility for the museum, but its collections were moved to another part of the town where new biology laboratories had been built. At first the general public continued to be admitted, but in time the museum was reduced to a teaching museum for zoology in the university. The other collections went into storage. In the 1970s the archaeology collections were put back on display in an archaeological museum, but this was short-lived. By the end of the 1980s the collections could only be seen by appointment, rather as they were in the 17th century.

2. See for example, Hume Brown, P. (ed.) (1892), *Tours in Scotland 1677 & 1681 by Thomas Kirk and Ralph Thorseby*, Scottish History Society, Edinburgh, p. 18.

3. See Cant, *op. cit.*, p. 104.

4. For an account of this museum see McIntosh, W.C. (1913), *Brief Sketch of the Natural History Museum of the University of St Andrews*, St Andrews University (re-printed from the *Museums Journal*, January to June, 1913).

Recent developments

In the 1980s the university's School of Art History began teaching postgraduate courses in Museum and Gallery Studies. In 1989 an experienced museum curator was recruited to run these courses. Around the same time, a survey of museum collections in the Scottish universities was published and the UK's Museum Registration scheme was introduced. The St Andrews response to these new developments was to reorganise the administration of the collections. The Museum Studies lecturer was appointed Keeper of Collections and assumed responsibility for applying for Museum Registration and increasing access to the collections, both within the university and for the public outside.

Improved management structures for the collections were put in place; various policy documents were drafted and approved; collections management systems were improved; registration was achieved. The collections became more actively used in teaching, particularly as practical material for Museum Studies, and a limited increase in public access was achieved, mainly through the organisation of temporary exhibitions by Museum Studies students. A proposal was made to further increase public access by establishing a visitor centre and museum. This project reached feasibility study stage in 1993, but was not pursued at the time because other projects were deemed higher priorities by the university. The visitor centre and museum project could only be revived if external funding became available, at least for capital development, and preferably also for revenue funding.

The commercial partner

In 1998 a commercial company approached the university with a request that offered hope for the visitor centre and museum project. The company wished to buy a site from the university for the development of a leisure club complex, including bars, lounges, health club, and retail and conference facilities. St Andrews was the chosen location for their club because of its attraction as a visitor resort, particularly as the "home of golf". The site the company wanted was at the entrance to the town, adjacent to the university's main science buildings, but also very close to the famous Old Course, whose 17th green the finished building would overlook.

Instead of selling the site the university agreed to lease it to the company for 99 years in return for an annual rent. Another condition was that the company

would have to provide certain facilities in the new building for the university, notably a museum and information centre, and the company would also have to maintain and provide staffing for these facilities. All this was agreed and the company obtained planning permission for the new building in the spring of 1999. Their intention was then to construct the building and have all its facilities open in time for the Open Golf Championship taking place in St Andrews in July 2000.

The development phase

The university's governing body, the University Court, accepted the agreement with the company on the basis that it involved no capital outlay on its part. The company had to pay for everything. However, how could the university be sure of obtaining premises suitable for its needs, particularly the needs of its museum collections? The answer was that the agreement included an obligation on the part of the company to provide building security that would meet standards recommended by the Museum and Gallery Commission's (MGC) national security adviser, and environmental conditions approved by the Scottish Museums Council (SMC). The company agreed to involve the university in selecting a museum designer. Because the university wished to ensure a high quality museum design it agreed that the fit-out budget, including any enhancements to the building required specifically for museum design purposes (for example, oak flooring), would be its responsibility. The company would still have to pay for this up-front, but it would be deducted from the ground rent it owed the university. In effect the university was giving the company a rental holiday for the first five years of the lease as the price for ensuring that it got the museum design it wanted.

During the development phase the university's Museum Collections unit had a staff of three curators involved full-time on museum preparations, working with the museum designer and working on the collections. Again, the company was charged for all university curators' time spent on this project.

Operational arrangements

By May 2000 the building had been completed, except for a few minor details, and all the separate elements of the museum fit out and design were coming together in preparation for installation. However, in the following month it was

revealed that the company had severe financial difficulties and it went into voluntary receivership. All work on the museum had to cease and the building was put on the market. For the time being, the museum could not be finished, the exhibits could not be installed and the public could not be admitted.

Prior to these dramatic developments numerous meetings had taken place between the university and the company, in order to establish systems for operating the museum. Obviously, these have not yet been tested, but the main points can be summarised. The legal agreement between the university and the company set down certain principles covering operations. These were then expanded in a series of service-level agreements, dealing with details in areas such as buildings' maintenance, cleaning, security, etc. The company's and the university's responsibilities were noted, as comprehensively as could reasonably be anticipated, though both parties were aware that they would need to be reviewed once the building was fully functional. The essence of the agreement was that the company would have to maintain the building and its environment, and would be responsible for managing visitors in and out of the museum. The university would retain ownership of and responsibility for the collections displayed within. Because it had ultimate control over the exhibits and the intellectual content of the museum it would be responsible for making any changes to displays deemed necessary or desirable. These would have to be paid for by the company. The university would, however, have to consider also the company's interests in, for example, selecting subjects for temporary exhibitions. In the event of disputes between the two parties there were mechanisms for arbitration.

Conclusion – Lessons learned

For the university, and particularly for the Museum Collections unit, this project had many attractive features. First of all, it cost the university virtually nothing and the director of the Museum Collections unit did not have to complete a single application form (contrast the paperwork that would have been necessary if public funding, for example, the National Lottery, had been pursued). The development also happened very quickly. On the other hand, because it had no monetary investment in the project the university had little or no control over many aspects, such as external design of the building and payment of contractors. Other aspects such as marketing and merchandising were also driven by the company, and because the company was responsible for visitor admission the university had to concede on issues such as admission charges.

When you make someone else pay for everything you cannot also expect them to surrender all control to you.

It could be said that an indication of the university's weakness in this arrangement was that it could do nothing when the company went into receivership. However, the business can only be bought by another company prepared to accept all the terms of the original agreement with the university, including provision of a museum; otherwise the university inherits the building. This provides legal protection for the university. But in the meantime we still await completion of the museum.

The suitability of this kind of partnership with the commercial sector can only be tested if and when the museum becomes operational. We hope and expect that this will happen, but we cannot control exactly when, and that may be the main weakness in the arrangement. If the museum that we have designed had opened in July I am sure it would have been hailed as a great success – at least it would have been the only major museum opening in 2000 not financed by the Lottery.

Despite the problems we are currently facing, I would encourage others to be alert to the potential of arrangements between museums and commercial partners. But there are some essential ingredients that are necessary before an arrangement such as the one I have described can have any chance of happening. Firstly, the location has to be particularly attractive. Have you anything comparable to St Andrews, and a site with a view as spectacular as one over the Old Course, as a bargaining counter? Secondly, you need to have collections and "a story" with the potential to be recognised as a visitor attraction. You should be able to argue that your museum could make a positive contribution to the partnership, and not just be tolerated as an obligation. If your assets (location, collections, etc.) cannot win you a good enough deal in the arrangement, perhaps it would be better if you paid for the museum yourself. You would also be left with all the running costs, but at least you would have full control.

SECTION 4
NEW PROJECTS

4.1. NEW UNIVERSITY MUSEUMS: AN OPPORTUNITY FOR A NEW STRATEGIC VISION

The Brooking Collection, University of Greenwich

by

Sue Millar, England

Abstract

Scant attention has been given to the issues relating to new university museum collections currently being established, either formally or informally, often in the "new", post 1992 universities in the UK. The formulation of a strategic vision and strategic plan from the outset can spearhead the development of new agendas for university museums. New specialist collections of national and international significance can support the re-evaluation and re-introduction of object based research within the relevant research community; locate a new concept of a university museum within the broader museum community; and play an important role across the university curriculum in regard to new approaches to teaching and learning. One of the main audiences must be the university's own students. The collection also has an important public relations function. The Brooking Collection of Architectural Detail, University of Greenwich provides a case study. This "living and growing collection" of national importance complements the acquisition of part of the Old Royal Naval College complex within Maritime Greenwich World Heritage Site. Organisational, financial, curatorial and conservation difficulties in setting up a new university museum collection have been addressed. In the year 2000 a sustainable future for The Brooking Collection remains in the balance.

Introduction

The eclectic nature of university museum collections, their cost and often neglect, as well as their disparate distribution across different academic departments in universities, has led to a focus on the rationalisation, conservation, and redefinition of the purpose of existing collections. But new university collections are constantly being established, either informally or formally, and so far these have received less attention.

New university museums have the opportunity to create a new strategic vision and to pursue new agendas for university museums from their inception. It is no coincidence that many new collections are to be found in the "new", post 1992 universities such as Middlesex University and the University of Greenwich. University museums are a status symbol. They provide a sense of *gravitas*. Moreover, they are recognised as good vehicles for a positive public relations profile and the promotion of the university to the wider public.

An earlier era of university expansion saw the establishment of the Sainsbury Centre at the University of East Anglia in Norwich in the 1960s. The Brooking Collection was brought to the University of Greenwich in 1992; the same year as the former Thames Polytechnic was granted university status. The housing of this Collection of Architectural Detail within the university played a part in convincing the government and the Greenwich Foundation that an "upstart" institution, a new university, was a suitable organisation to be granted a long term lease for the occupancy of three of the four blocks or "courts" within the former Royal Naval College. This 17th and 18th century baroque complex of buildings designed by Sir Christopher Wren and his successors is part of the Maritime Greenwich World Heritage Site that received its inscription from UNESCO in 1997.

Since new collections are not hide bound by the weight of past traditions in terms of their organisational structures and outdated research expectations there is, or should be, scope to spearhead new agendas and new directions. Unfettered by past practices, but bound to the past by virtue of new collections, these new university museums have the chance to redefine old agendas in a selective way as well as creating new ones. In my view they can develop a unique role and definitely should not fall into the trap of becoming "all things to all people" by seeking an identical profile to local authority and national museums. Access strategies can be more specific and more targeted towards the student body within the institution as well as towards the general public.

However, these new university museums should not renege on their obligations in terms of conservation and curatorship or limit communications to displays and exhibitions as has happened too frequently in the past with many of the smaller "hidden collections" in universities. By establishing an organisational structure that enables the museum to maximise external funding opportunities, including the appointment of professional museum management and curatorial staff; and by gaining registered museum status (and designated museum status for specialist collections of national significance), the university museum places itself within the context of the wider museum sector. By adopting new funding models that include charging for advice; by offering specialist programmes linked to the collection and producing a range of publications, university museums can exploit scholarship, research and teaching and learning opportunities related to the collection as an additional income stream. By integrating the study of the collection into both relevant academic undergraduate and postgraduate degree programmes and in the development of generic key skills across the curriculum, university museums are well placed both to revive object based research within the academic community as appropriate and also meet a widening participation agenda.

It is axiomatic that the broader university community must be the main constituency for university museums, their *raison d'être*. In some shape or form they must ensure the collection has meaning for all students either through a social, educational or research role. But by linking with the external museum community; establishing a focal point for relevant scholarship and research; and engaging with the public as a specialist museum with various points of access, including the use of new technologies, university museums have the chance to play a central rather than a peripheral role in shaping their own future and that of the university. Is this all "blue skies" thinking and aspiration? I hope not. If we take the Brooking Collection as a case study we can explore the issues I have raised.

The Brooking Collection

New museums are not exactly "born in chains" but it would be surprising if their development was straightforward and without problems. The Brooking Collection is no exception. In 1992 the main Brooking Collection was provided with a permanent home including a 3 300 square foot gallery on the University of Greenwich's site at Oakfield Lane, Dartford, Kent and a 7 000 square foot warehouse. Initially the collection was on loan from Charles Brooking and The

Brooking Architectural Museum Trust, set up in 1986, for a trial period of two years and included the appointment of Charles Brooking as a part-time lecturer. But funding issues arose immediately. The university was unable to seek support from the Higher Education Funding Council for England (HEFCE) since it did not own the collection. Equally, it could not apply for grants from the Area Museums Council or Heritage Lottery Fund since the Brooking Collection was not in a position to gain Registered Museum Status because the question of ownership of the collection remained unclear. To break the deadlock, Charles Brooking was persuaded to "gift" two major areas from his private collection to the trust including the items on display in the Brooking Collection Gallery at the Dartford Campus and the "timber sections". A professional curator was appointed. Provisional registration was granted by the Museums and Galleries Commission on 15th July 1998 and full registration was confirmed the following year, July 1999. The trust's position in relation to the ownership of the permanent collection was clarified; a robust acquisitions and disposal policy was ratified; and a seven-year agreement was signed between The Brooking Architectural Museum Trust and the University of Greenwich.

Cast iron window and ornate fittings dating from the early modern period, Ironmongery Section, The Brooking Collection.
Source: University of Greenwich.

Despite early constraints limiting the scope for fund raising initiatives the Brooking Collection was granted GBP 90 000 by the Sainsbury Monuments Trust initially to document the collection and most recently to extend access to the artefacts. Visitor numbers increased from 574 in 1995 to 1 394 in 1997. Continuing professional development workshops have been held for staff of English Heritage, local authority conservation officers and conservation architects, including one on period cast iron. Many queries from private individuals who are restoring their own houses have been answered. An annual exhibition is provided for Dartford Heritage week. The professionalism and dedication of the one full time curator has been largely responsible for this quiet success story so far. In the Forward Plan for 1998-2000 the keeper writes: "Access: the Keeper is the only full time member of staff and this prevents the publication of regular opening hours...The "by appointment" system is almost certainly an inhibiting factor for potential visitors." The trust employs a consultant development officer/fundraiser, but there are no other paid staff. Four NADFAS (National Association of Fine and Decorative Arts) volunteers are cataloguing the ironmongery collection comprising several thousand items of door and window furniture – doorknockers, fingerplates, sash fasteners, hinges, locks and even a few "engaged/vacant" toilet locks.

The collector: Charles Brooking

The Brooking Collection is at a critical juncture in its development. Charles Brooking is the living embodiment of English eccentricity, a collector from childhood. In 1966 he managed to persuade his accountant father to take him to the demolition site that was the old Stock Exchange in Threadneedle Street, London. He came away with door furniture and sections of architrave. The same year his mother bought him a complete Georgian sash window for GBP 1 from a demolition site in Guildford. It was a 13th birthday present. The collection continues to grow supported by the unabated enthusiasm of Charles Brooking.

It includes not only the 100 000 items in the "official" Brooking Collection at the University of Greenwich, but also 60 000 architectural artefacts he keeps at home. These filled 15 large furniture vans and weighed more than 20 tonnes during a recent house move. Windows, doors, decorative domestic glass, skirting and picture rail mouldings, rainwater heads and ironmongery and grates of all kinds dating from the 16th century to the present day have been saved from the demolition of urban and rural domestic and commercial properties large and small across the UK.

Brooking himself comments: "People think I am a dilettante who is not quite of the real world because of my total obsession with my collection." He explains that the reality is very different. A life spent wandering around demolition sites, doing deals with contractors and removing all sorts of items unaided and in all weathers is not a bed of roses. Brooking is "not so much a collector as a visionary, a social historian and leading activist for the preservation and conservation of the many thousands of small but significant items of our architectural heritage that are under threat," writes Clive Fewins.[1] A deeply serious man, he is convinced that if he was not carrying out this work nobody else would do so. Brooking is probably right in this assumption. His greatest passion is for Georgian sash windows. He was asked to date the windows at 10 Downing Street and the Sir John Soane Museum in Lincoln's Inn Field. The collection includes about 20 000 sash window pulleys and Brooking – it is claimed – can date a sash window to within three years of its manufacture by the design of the pulley which was constantly changing.

Formulating a future strategic plan

The Brooking Collection faces an uncertain future. Strategic vision and careful professional management is required to realise the potential of the collection in a university context and in the particular context of the University of Greenwich. With an ever-expanding collection, storage facilities at the university are full. There is a backlog of documentation, no in-house remedial conservation provision and no environmental control mechanisms for effective preventive conservation, although the South East Area Museum Service (SEMS) has recently offered a grant of GBP 500 for the purchase of environmental monitoring equipment. In common with many university art collections the Brooking Collection is under utilised for collections-based research, art and design education, or the development of heritage building, conservation and restoration skills and is little known or exploited as an asset either within the university community or within the wider community of South East London and Kent. There is a need for a sense of direction beyond the business of collecting. In formulating the future strategic plan for the Brooking Collection it is possible to define a new role for a university decorative art museum in the broad context of regeneration, renewal and sustainability.

1. "The window into a man's soul", *The Times*, November 21st 1998, pp. 23–24.

The University of Greenwich is in the fortunate position of having the opportunity to support and build on the efforts of Charles Brooking and the Brooking Architectural Museum Trust. It could establish an International Centre for Architectural Building Conservation Skills to develop practical, technical skills training; a conservation laboratory open to the public and a collections-based research and publications programme as well as making links between past and future industrial design as part of design education. Such a scheme would provide training and employment in the shortage area of heritage craft and industrial skills, attract funding – particularly from the Heritage Lottery Fund – and bring in visitors without compromising the concept of a university museum as a distinctive type of museum.

Of course there should be exhibitions, but in redefining the role of a university decorative art collection the notions of research and scholarship must remain paramount. Re-establishing and retraining in lost skills and techniques relating to architectural detail in itself creates ready made research opportunities. Conservation workshops have an endless fascination for the general public as has been shown by the National Museums and Galleries on Merseyside: they also provide the infrastructural base for conservation research. Architectural historians, students of design history and undergraduate students from all disciplines who need to improve their critical awareness and language abilities can all benefit from the Brooking Collection if they are given the right introduction. Such a brave concept needs a five-year development strategy and staged implementation, but it has the benefits of echoing all the energy, dedication, drive and determination shown by the founder Charles Brooking in creating the collection in the first place.

Conclusion

In establishing the Brooking Collection as a permanent resource for lifelong learning, a support for the on-going building conservation activities at Maritime Greenwich and a pioneer of new approaches to managing a university specialist decorative art collection, the University of Greenwich would continue to maintain its innovative, challenging stance in relation to the perceived existing boundaries of university education. In the process not only would a new collection be assured a secure future, but also university decorative art museums in general would benefit from this bold venture so appropriate to be taking place at Greenwich at the start of the new Millennium. For the time being the uncertainty remains.

4.2. PUBLIC UNDERSTANDING OF SCIENCE: UNIVERSITIES AND SCIENCE CENTRES

by

Hannu S. Salmi, Finland

Abstract

The Heureka Science Centre in Finland was founded by the University of Helsinki and other interest groups at the beginning of 1980s. Heureka was opened in April 1989 and it has since become a remarkable national and international institute. The first World Science Centre Conference was hosted by Heureka in 1996. Its temporary exhibitions have been seen in more than 20 countries. Heureka is not a university museum, but the University of Helsinki is still the mainstay of the Science Centre Foundation. This has made it possible to present recent and past research to wider audiences in a very successful way. Heureka does not only present natural sciences and technology. Its main mission is to cover all academic fields. This can be achieved by developing an interdisciplinary approach. In the United States, modern science centres expanded in the context of the Sputnik phenomenon but they had their origins in the old science and university museums. The development of science centres and museums must be seen within the broader frame of the development of society. Science centres are no longer isolated hands-on workshops created by a couple of science freaks, but have become part of a larger movement, promoting the public understanding of science: they are influenced by, and in turn affect the thinking, not only of the scientific community, but also other groups of society.

Introduction

Exhibitions are quite a new way of transmitting information. For the general public, an exhibition is most often related to a museum. Museum exhibitions are also notorious for intrinsically passive viewing and old-fashioned format.

The Ashmolean Museum is often considered to be the first science museum. It was founded in 1683 at Oxford University to house Elias Ashmole's natural history collections. The museum is still operational (it re-opens in spring 2001 after a one year renovation project) as Oxford's historical science museum, containing a fine collection of scientific instruments dating from medieval times (Hudson, 1988). The Ashmolean museum was created by, and was intended for, the university. This university museum became a model for many other museums. However, most museums open to the general public have a different background.

Heureka Science Centre, Finland

Source: Heureka Science Centre.

Science and technology museums have their own particular history. The early name, Cabinet of Curiosities, often used for these institutes, describes them well, and they very soon became institutionalised (MacGregor, 1987). The

founding of science museums can be traced back to the ideas of such respected scientists as Bacon, Descartes and Franklin. The first collections of fine classic scientific models were gathered by wealthy aristocrats: the *Instituto e Museo di Storia della Scienza* in Florence, for example, still exhibits the scientific treasures of the Medicis, including original telescopes handmade by Galileo. In Sweden, Christian Polhem (1661-1751), inventor and engineer, designed models that he donated to the Royal Model Chamber exhibition. Today the exhibition is still open to and popular with visitors. Royal families and economic rulers have played an important part in the foundation of all kinds of museums. In many countries, the most common museum was a presentation of the country's glorious history and art with the portraits of its monarchs.

Just as national museums and galleries grew up from a need to support the state and nationalism with heroic wars and historical knowledge, the development of technology and new inventions made it possible to use technology as a tool for nationalism during the era of rapid industrialisation. An international reputation was important for states, and equally so for industry and new manufacturing companies. This double need for the marketing of science, technology and production provided the rationale for establishing many science museums and modern science centres.

Industrialisation gave birth to the Great World Exhibitions, which presented the latest technological and industrial achievements, supported by art, often in a spirit of nationalism. These exhibitions were very popular and even financially successful. Following the success of the Crystal Palace Exhibition in 1851, the South Kensington museums (today the Science Museum, Natural History Museum, and Victoria and Albert Museum) were established, appropriately, on Exhibition Road. Most important science museums founded in the second half of the nineteenth century were based on Great Exhibitions (Danilov, 1982; Hudson, 1988) and the same trend has been important for modern science centres a century later. The Museum of Science and Industry in Chicago was started in a pavilion built for the world exhibition forty years earlier, and the Pacific Science Centre acquired part of its exhibits from the US science department of 1962 Seattle World's Fair. The Exploratorium science centre, opened in San Fransisco in 1969, is still housed in the Panama-Pacific World Exhibition Hall of 1915. Halls and exhibits originally made for the world expos are still, in the 1980s and 90s, used by science centres.

The social, cultural and technological development of society cannot be neglected. Industrialisation brought the need for a better educated workforce.

Technology and science played an increasing role in the lives of ordinary people, and came to occupy a place beside religion, the state, art and history in the socialisation process.

Other characteristics of science museums established from 1850 to 1940 comprise: financial support for private collections to be made publicly accessible; a perceived need for enhanced science education; museum directors with strong characters and personal support in high social echelons.

The first interactive museums and exhibitions

The Deutches Museum was founded in the 1920s following Oskar von Miller's plan for a museum for the master-works in natural science and technology. The most obvious difference between this and earlier museums was that it contained many examples drawn from contemporary science and technology. However, the most radical innovation was the models, exhibits and demonstrations, which visitors were allowed to touch and were able to use by themselves (Danilov, 1982). The museum created a new medium of communication: the interactive exhibition.

In the United States, it was the so-called Sputnik phenomenon that spurred the expansion of modern science centres. No direct link can be documented, but the crisis in national confidence that resulted from Sputnik had a knock-on effect on all education in the United States. The attitude towards the studying and teaching of science changed dramatically in the United States after the Sputnik phenomenon. The educational system in the United States was totally reformed. Science education was seen as an element of national security, in relation to the Cold War and the space race. Federal governments gave resources to local school administrations for the improvement of science education. The scholarship system was renewed. Some scientists were enlisted to develop new curricula and learning materials for schools and to reorganise teacher education. Resources were also allocated to pedagogical development projects (Hein, 1990; Salmi, 1993).

Although there were several important projects during the 1960s, much credit goes to Professor Frank Oppenheimer in the boom of the new science centre ideology. He first worked on the Physical Science Study Curriculum (PSSC) and Elementary Science Study (ESS) projects, developing science education, in reaction to the Sputnik phenomenon. Later, he started to develop a new kind of

science centre – the Exploratorium (Hein, 1990). In 1969 two important science centres were opened, and they influenced all subsequent science centre projects worldwide: the Exploratorium in San Fransisco and the Ontario Science Centre in Toronto. Oppenheimer re-created the core concept of the famous American psychologist and educator John Dewey. Dewey's much quoted idea of "learning by doing" was also Oppenheimer's key concept and in his work it became the so-called "hands-on" principle. "A Rationale for a Science Museum" (Oppenheimer, 1968) is a manifesto for modern science centres.

Modern science centres in the 1990s

The Heureka Science Centre in Finland was founded by the University of Helsinki and other interest groups in the early 1980s. Heureka was opened in April 1989 and it has since become a remarkable national and international institute. The first World Science Centre Conference in 1996 was hosted by Heureka. Its temporary exhibitions have been seen in more than 20 countries.

Heureka is not a university museum, but the University of Helsinki is still its mainstay. The Science Centre Foundation was established by the University of Helsinki, the University of Technology, and the Federation of Finnish Learned Societies. This has made it possible to present research both past and recent to wider audiences in a very successful way: Cultures of the Ancient World, Illusions – the Brain Exhibition, the Forest and Us, Me and You, Finnish Roots, Nordic Explorers, Environmental Balance and Communication are just a few examples of this co-operation. Heureka does not only present natural sciences and technology. Its main mission is to cover all academic fields and this can be achieved by developing an interdisciplinary approach.

Research related to Heureka's exhibitions and school programmes (Salmi, 1993, 1997, 1998) clearly shows their educational effects and more especially, the effects on intrinsic motivation. Eighty per cent of the first and second year students at the University of Helsinki had visited Heureka's science exhibitions before they started their studies there.

Heureka is known for its highly interactive and popular science exhibitions. The content of these exhibitions is developed in close co-operation with the best available scientific expertise. Thus, the exhibition is reliable and based on the most recent knowledge in the field. This would not be possible without the university's input. The value of this expertise cannot be overestimated.

The development of science centres and museums must be seen within the broader frame of the development of society. The growth of Heureka in Finland was clearly related to major developments in society: the crisis of scientific literacy and visions of the information society. The Chernobyl accident clearly showed the lack of expertise of the media in relation to science and technology. It also showed that experts lacked the ability to diffuse meaningful and understandable scientific information.

New forms for public understanding of science and scientific literacy

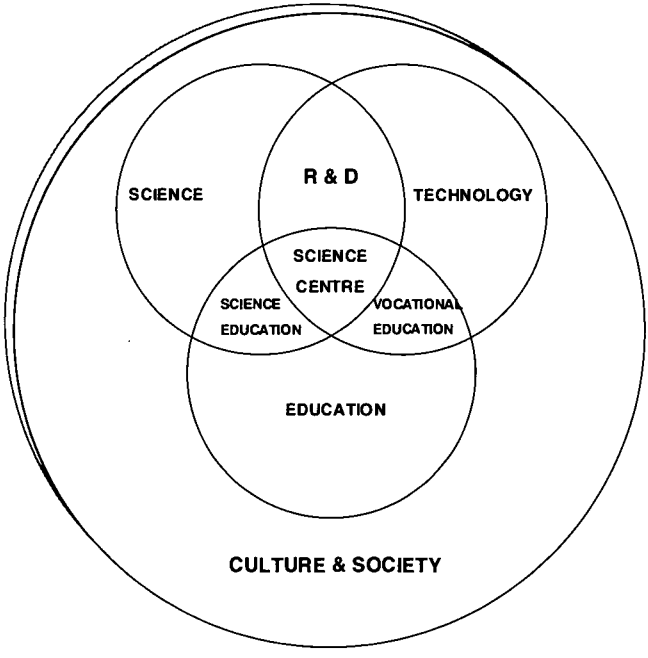
One important problem which arises in the discussion of the role of science centres and universities is the meaning of the word "science". In English, science generally means the natural and physical sciences and is often limited to physics, chemistry and biology. However, in German, Swedish or Finnish, for example, the words *Wissenschaft*, *vetenskap* and *tiede* include the humanities, history, psychology, social science and linguistics. The modern science centre must be able to present phenomena from all areas of *academic* reseach.

The definition of the position of a science centre in its relation to science, technology and education is presented in Figure 1 (Salmi, 1993). Science education is presented at the point where science and education overlap. Science and technology combine in the area of research and development (R&D), where academic research is used to develop industrial methods. Vocational education is positioned at the intersection of technology and education.

A science centre is located as shown in Figure 1, where science, technology and education all meet. According to this definition, a science centre features all three and these three would be integrated into any exhibition, event or audience activity, depending on its nature.

Science centres are no longer isolated hands-on workshops created by a couple of science freaks, but have become part of a larger movement promoting the public understanding of science. They are influenced by, and in turn affect the thinking, not only of the scientific community, but also other groups of society (Falk and Dierking, 1992; Salmi 1993, 1998; Persson, 1996, 1997, 1999).

Figure 1. **Science, technology, education and a science centre in relation to society and culture**



Science education is not only a question of advancing technology or of demand for a scientifically qualified workforce, but also a question of social goals. As Coombs summarise: "The aim is not solely to produce more scientists and technologists; it is also to produce a new generation of citizens who are scientifically literate and thus better prepared to function in a world that is increasingly influenced by science and technology" (Coombs, 1985, p. 246).

The same trend can be recognised in current developments. The growth of science centres in the 1990s, especially in Europe, is closely related to the development of the information society. Communicating science to the public through different media is not only a matter of gaining sufficient support for scientific research and academic education from society but also a process of giving citizens their basic democratic rights in relation to science information (Salmi, 1993, 1997; Persson, 1997, 1999; Popli, 1999; Godin and Gingras, 2000). The continuing worldwide trend in the 1990s was a broadening of the subject range of science centres and an increasingly interdisciplinary approach

to exhibition themes. The rapid development of genetic research and information technology at the moment closely resembles the situation in the 1960s which saw the sudden expansion of space and nuclear technology.

To promote the public understanding of science new forms are actively sought. Museums and science centres have seen a regular growth in the numbers of their visitors during the last decade. A huge amount of information, especially about modern phenomena, is received from family, friends and peer groups. The role of television, libraries, magazines and newspapers is also essential. Most of these modes of transmitting information can be qualified as informal learning, aimed at young people via informal, out-of-school educational programmes, or as clearly informal learning, occurring totally outside any educational institutions, be it young people as well as adults.

Personal computers and the Internet are now self-evident sources for informal learning. However, there is very little reliable and valid research concerning learning via Internet (Clark and Slotta, 2000). Most of what we know about this subject is based on everyday knowledge. The rapid development of new informal learning sources has proven the radical ideas of Illich (1971) and Gardner (1991). The expression "learning webs" already used three decades ago has become more than apt.

What is the difference between a good and a bad science centre? The answer might be that a bad science centre *was* a good centre fifteen years ago, but then nothing was done and it became either an old-fashioned exhibition or a science museum exposing only outdated facts. There has recently been discussion about the role of science centres (Beetlestone *et al.*, 1998). Based on recent research, Persson (1999) has shown, that both the popularity of these centres worldwide and the basic principles of these institutions with their offering real hands-on scientific experiments, informal education and motivation are proof that they still provide an important channel for presenting science to the general public.

Science centres are firmly entrenched in the society that nurtured and continues to support them. The impact of developments in society, science and technology is crucial to the process of setting up and developing science centres. If these institutions cannot respond to social change, and renew themselves, they could very easily lose their ideological credibility and financial support (Hudson, 1988; Persson, 1999). Although university museums have their own role and history, they can no longer limit themselves to academic audiences. Especially since the unique contents of these museums deserves to be presented to wider audiences as a fruitful means of advancing the public understanding of science.

REFERENCES

BEETLESTONE, J., JOHNSON, C., QUIN, M. and WHITE, H. (1998), "The science centre movement: context, practice, next challenges", *Public Understanding of Science*, 7, pp. 5-22.

BITGOOD, S. (1988), *A Comparison of Formal and Informal Learning*, Technical Report, No. 88-10, Jacksonville, AL, Centre for Social Design.

CLARK, D. and SLOTTA, J. (2000), "Evaluating media enhancement and source authority on the Internet: the knowledge integration environment", *International Journal of Science Education*, 22, 8, pp. 859-871.

COOMBS, P. (1985), *The world Crisis in Education, The View from the Eighties*, Oxford University Press, Oxford.

CRANE, V., NICHOLSON, H., CHEN, M. and BITGOOD, S. (1994), *Informal Science Learning. What the Research Says about Television, Science Museums, and Community-Based Projects,* Research Communications Ltd, Dedham, MA.

DANILOV, V. (1982), *Science and Technology Centres*, MIT, Massachusetts.

DEWEY, J. (1938), "Experience and education", *The Kappa Delta Pi Lecture Series*, Reprint 1965, Collier Books, New York.

FALK, J. (1982), "Environmental education: formal *vs.* informal learning", *Environmental Education and Information*, 2, pp. 171-178.

FALK, J. and DIERKING, L. (1992), *The museum Experience*, Whalesback Books, Washington, DC.

GARDNER, H. (1991), *The Unschooled Mind*, Basic Books.

GODIN, B. and GINGRAS, Y. (2000), "What is scientific and technological culture and how is it measured? A multidimensional model", *Public Understanding of Science*, 9, pp. 43-58.

GREGORY, R. (1988), *Hands-on science. Introduction to the Bristol Exploratory,* Duckworth, London.

HEIN, H. (1990), *The Exploratorium. The Museum as Laboratory,* The Smithsonian Institution, Washington, DC.

HUDSON, K. (1988), *Museums of Influence*, Cambridge University Press, Bath.

ILLICH, I. (1971), *Deschooling Society*, Harper and Row, New York.

MACGREGOR, A. (1987), "The Cabinet of Curiosities in Seventeenth-Century Britain", in O. Impey, and A. McGregor (eds), *The Origins of Museums*, pp. 147-158, Clarendon, Oxford.

OPPENHEIMER, F. (1968), "A rationale for a science museum", *Curator*, November.

PAL, Y. (1996), "Science in Culture and the Good Society", Paper given at the first Science Centre World Congress, June 14-18, Heureka, Vantaa, Finland.

PERSSON, P-E. (1996), "Science centres: dedicated to inquiry and exploration", *Physics World*, July.

PERSSON, P-E. (1997), "Contemporary Science in Museum and Science Centres: Concluding Remarks", in G. Farmelo and J. Carding (eds.), *Here and Now, Contemporary Science and Technology in Museums and Science Centres*, Science Museum, London.

PERSSON, P-E. (1999), "Science centres: A motivational asset", Paper presented at UNESCO-ISCU world conference on science, June 28, Budapest.

POPLI, R. (1999), "Scientific literacy for all citizens: different concepts and contents", *Public Understanding of Science*, 8, pp. 123-137.

SALMI, H. (1993), *Science Centre Education: Motivation and Learning in Informal Education*, University of Helsinki, Department of teacher education, Research report 119.

SALMI, H. (1997), "Science learning and motivation in informal settings", paper presented at the annual meeting of the National Association for Research in Science Teaching, 21-24 March, Chicago, IL.

SALMI, H. (1998), "Motivation and meaningful science learning in informal settings", paper presented at the annual meeting of the National Association for Research in Science Teaching, 19-22 April, San Diego, CA.

ST. JOHN, M. (1990), *First Hand Learning: Teacher Education in Science Museums*, Association of Science Technology, Washinghton, DC.

4.3. FUNDING AND MUSEUM OWNERSHIP

by

Kati Heinämies, Finland

Abstract

The University of Helsinki has several small museums which operate in circumstances that leave much room for improvement: they are located in premises unsuitable for the purpose, they are under-staffed and they have limited financial resources. Most of these museums, which are open only by appointment, were originally teaching collections that were not meant for public display. In 2001 the space occupied by the Department of Geology will become vacant and will provide a site for a new museum which will be open to the public on a regular basis and display the history and development of Finnish scholarship. The greatest problem for this museum project is money. The university is planning to establish a broadly based foundation and whilst bearing the main responsibility for the operations of the foundation and the museum, would welcome spiritual as well as material support from others.

The museums of the University of Helsinki

The museums of the University of Helsinki can be roughly divided into three units. The largest of these, the Finnish Museum of Natural History, is an independent institution of the university and employs a personnel of over 120. It houses the national natural history collections and has certain national obligations, such as different kinds of nature-related follow-up studies, bird ringing, dating and research conducted in the dating laboratory. Exhibitions are also a significant part of the museum's activities.

The Helsinki University Museum operates as a separate unit under the university administration and employs two people. It is responsible for objects

of historical value relating to the university: old scientific equipment, furniture and an art collection. The exhibition space is located in the basement of the administration building. Due to the impractical location, the museum has been open only by appointment.

The third unit or group consists of collections established by various departments of the university and which have been used for teaching purposes. Some of these collections are also open to the public.

Helsinki University Museum, Finland

Source: Author.

Financially, these three units operate on different bases. The Finnish Museum of Natural History receives most of its funding from the national budget and some specific funding from the Ministry of Education due to its national obligations. The Helsinki University Museum is funded from the university's own funds, whereas the smaller museums are funded by the faculties and departments.

Consequently, the museums' starting points and circumstances are not the same. The small museums operating under the faculties and departments are in the

most disadvantaged position. The development of these small museums has probably followed patterns familiar to other universities: the collections originally used for teaching purposes have turned into museum exhibitions, which are rather irregularly open to the public and are, from a museal viewpoint, often inadequately maintained. Not enough expertise or funds have been available and, thus, the collections have been kept up by part-time employees or even by retired volunteers, so that the only necessary expenditures have been for the facilities.

The modern world sets increasing demands on effectiveness, which is reflected in the attempt to make better use of the collections. The university's aim is to open the collections to the public and develop them into active centres meeting criteria set for museums. The university also understands that displaying its activities, achievements and honourable history in the museums is an excellent way of promoting a positive public image.

The new museum project

The university has been planning to combine the collections of the Helsinki University Museum, the Museum of Medical History, the Museum of the History of Dentistry, the Museum of the History of Veterinary Medicine, and the collection of textiles, clothing and craft design, and house them in a single building. The building that will be used is a former laboratory and museum built for the university in 1869 and situated right in the centre of Helsinki. It has strong museological traditions and is the oldest building in Finland that has continuously housed museums since its completion. During the past decades, it has accommodated the Department of Geology and the Mineralogical Museum. Once Geology has moved out, the planned new museum will have an exhibition space of 1 300 square metres for displaying the history of scholarship, research and the Finnish university institution. The Mineralogical Museum will remain in the building to complement the museum complex. There will also be room for a café, museum shop, and library on medical history. There is a large auditorium in the building which will open up new opportunities.

The University of Helsinki is the oldest university in Finland. It was founded in 1640 and for almost 300 years it was the country's only university. This is why the University of Helsinki has a special status in the history of Finnish scholarship. As Finland does not have a museum specialising in the general

history of science, the founding of this new museum has wider significance than just exhibiting the history of the university.

Funding the new museum

The university leadership has given its support to the museum project. However, as always, money seems to be the biggest problem. The university is not willing to finance the project from funds allocated from the national budget to support the basic tasks of the university, *i.e.* research and teaching. If it did so, the academic personnel could easily turn against the project as they would consider the museum to be chipping away at their already scarce resources.

The status of the new museum has been under consideration for a long time. One alternative would be to create an independent institution similar to the Finnish Museum of Natural History. However, the new museum is not as closely connected to academic teaching and research as is the Finnish Museum of Natural History. There are no grounds for a national status which would bring in special funding directly from the Ministry of Education. In practice then, the new museum would be left sharing the university's basic funding awarded by the government.

To solve the financial problems, the university has established a foundation for which it has sought partners from various fields. The rector has sent letters to learned societies, foundations and funds asking them to contribute to the basic capital of the new Helsinki University Museum with FIM 50 000 (EUR 8 400). The response has been very positive: a total of 13 letters was sent and nine affirmative answers had been received by September 2000. Amongst others, medical funds and foundations, the City of Helsinki and the Finnish Cultural Foundation have expressed their willingness to become members of the museum foundation. The University of Helsinki Student Union has also expressed its interest – students and student life will, after all, form an important part of the exhibition content. In addition, the university has sent six letters not directly asking for money, but for support in kind (for example, expert support in planning exhibitions) which may, perhaps, eventually lead to financial support.

According to the preliminary regulations of the foundation, its primary purpose is to foster the intellectual and material cultural heritage of the University of Helsinki as well as to promote research into the history of the university. The

regulations assign the museum with the task of caring for objects of historical and artistic value, old scientific equipment, furniture, works of art and the photographic collection. It will collect, study, publish and exhibit material related to the history of scholarship, research and the university institution. It should be noted that no university property will be transferred to the foundation, but it will ensure the maintenance of the valuable articles and art collections of the university.

Despite the fact that several partners will contribute to the basic capital, the University of Helsinki will naturally bear the major responsibility for the annual funding of the museum, deriving the money from its extra-budgetary (as opposed to national or external) funds. This will prove problematic. The estimated annual budget of the museum is six million marks (about one million Euros). The number of personnel has been kept at a minimum, but the largest single expense, almost four million marks, will be facility expenses. The building, which needs to be renovated, is owned by the state: the government will pay for the renovation and rent it to the university or the foundation. This is the expense that has become a problem. Two-thirds of the operational budget being spent on rent is an impossible situation for a museum. Even if the university would be prepared to invest the same amount of money in the new museum as it has in the current Helsinki University Museum, there are still over three million marks of additional expenses to be covered.

The unanswered questions

Several questions concerning the relationship between the university and the foundation remain unresolved. Would it be worthwhile for the foundation to rent the whole building straight from the government or should the university be the tenant? In which case the foundation could rent the facilities for the museum from the university and the auditorium be left for the use of the university. Should the museum personnel transfer to the employment of the foundation or should they continue to work for the university? Should the foundation sell services to the university and vice versa, for example in the case of payment transactions? Should the foundation run the café and shop itself, or should they be rented to an outside entrepreneur?

The university administration has discussed the finances with the Ministry of Education, but the Ministry has not revealed its standing on the matter. The University of Helsinki Student Union has expressed an interest in taking part in

the financing of the annual expenses – the Student Union's share of the expenses could pay for, for example, the annual salary of one person.

It is extremely important for the operations of the museum that the foundation has representatives from various fields. The associations and societies that have contributed to the basic capital will have delegates in the representative body. By engaging them in the museum activities, they may be expected to support the museum later with separate funding for certain exhibitions, large acquisitions, etc., even if they are not committed to sharing the annual expenses.

The crucial questions for the museum project are twofold. First, how can we convince the university administration of the advantages of the investment? Secondly, how can we convince the academic community of the fact that the museum is not competing for funds allotted for the basic tasks of the university, and that it is important for the students' identity to know the history of their own fields?

The operations of the museum have to be reorganised somehow in order for the university to retain its credibility as an institution of higher learning concerned for its cultural heritage and willing to pass this heritage on to present and future generations. However, a university museum can secure its position in the academic community only with credible, visible activity.

4.4. THE PATRAS UNIVERSITY SCIENCE AND TECHNOLOGY MUSEUM: FULFILLING THE UNIVERSITY MUSEUM'S DUAL ROLE

by

Penelope Theologi-Gouti, Greece

Abstract

Patras University is preparing a new Science and Technology Museum, which acquires, conserves, and researches the historic traces of the sciences and technology. Its starting point will be those sciences studied in the university's academic departments. The museum's activities will be accessible to all possible sectors of society. The goals of the museum are to create an important teaching aid for science and technology; and to disseminate knowledge about the sciences, their evolution and achievements, and make them understandable to all levels of the general public. Patras University is preparing for the creation of its museum using three parallel procedures based on international standards and experience.

University museums and collections

University museums and collections share much in common, particularly their close relationship to university activities and their privileged access to the skills and knowledge of academics and research results. At the same time they are very different from each other. They are of different sizes, have different legal status within their universities and different levels of importance. They conserve different types of collections and use different museological approaches for their collections (or none at all). Each of them has different goals concerning their relationship with university departments, the academic community and the general public.

In some countries, such as Greece, the contribution of museums to university teaching and research is evident in only a number of specific academic

disciplines which emphasise field research such as biology, geology, anthropology, ethnology and folklore studies. These discipline-related museums or collections were created long ago as the result of the fieldwork of department staff. The creation of museums or collections in non-field based disciplines only started very recently, and universities and university departments have to prove their value to the wider academic community.

Establishing the public role of the university museum

Many university museums and collections are far from serving the real needs of the academic community even if they do hold a wonderful heritage and have a strong tradition in supporting teaching and research or other university activities. Such museums are usually even further from serving the public and fulfilling a full educational role within society.

A significant number of the museums and collections in universities are simply collections of objects gathered by distinguished scholars from special researches, fieldwork and projects in order to create a resource for teaching and further research (Stanbury, 2000). This is why they are usually housed within laboratories or academic departments. They may occasionally serve other kinds of users, notably by permitting a few school visits, but generally they are rarely accessible to other members of the academic community or to the public. Some examples of museums and collections of this category are the Botanical and the Zoological Museums of Patras University, and a number of the museums of Athens University. There are many others.

More sophisticated university museums have followed a longer and more complicated route. Even if they were derived from specialist research, fieldwork and projects, at some stage in their history they understood that they could challenge the accepted position of the museum within the academic community and the relation of the museum with the public. These museums continue to play an important role in their particular disciplines and use this as the basis for providing an enjoyable and educational experience for children, young people and the general public. They organise special exhibitions, educational programmes and activities. There are many examples of university museums of

this type. Some good examples are at the Université Libre de Bruxelles,[1] and the Museo da Ciencia de Universidad de Lisboa,[2] among others.

Patras University Science and Technology Museum

Patras University Science and Technology Museum intends to become a university museum of the sophisticated type referred to above (Theologi-Gouti, 2000). It aims to acquire, conserve and research the original artefacts of the sciences and technology, starting with those sciences taught in the university's academic departments, in order to exhibit them for the purposes of study, education and enjoyment. This will be in accordance with the ICOM definition of a museum.[3] The museum's activities will be accessible to as many sectors of society as possible as the university understood at the earliest stage of the creation of the museum that it could become an important means of communication inside and outside the campus. When it is finished, the museum will provide an interesting experience for general visitors and will therefore have an important role in supporting the university in its responsibility to serve the public. The goals of the museum include developing an important teaching aid for science and technology; disseminating knowledge about the sciences, their evolution and latest achievements; and making science and technology understandable to all levels of the public.

The university's preparations for the opening of the museum in order to fulfil its dual role are guided through three parallel procedures (Theologi-Gouti, 2000). Each is based on international standards and experience. They are the design and construction of the new museum building; the collection, documentation and evaluation of the scientific and technological heritage; and the creation of the museum's legal status, function and co-operative relationships.

The new museum building

A building and museological programme has been developed in collaboration with the university departments. Bibliographical and Internet resources on

1. Université Libre de Bruxelles: www.ulb.ac.be/musees/
2. Museo de Ciencia de Universidad de Lisboa : www.museu-de-ciencia.ul.pt/
3. International Council of Museums Statutes: www.icom.org/statutes

different science and technology museums and different university museums worldwide have been consulted in order to understand what happens in other similar museums. The framework of the museum has been decided and the different special needs for the presentation of the different sciences, the organisation of activities and exhibitions as well as the organisation of educational programmes, have been set down in writing. The documentation also contains a description of the spaces dedicated to the different museum activities such as collection, documentation, educational programmes, management, etc.

The museological programme for the Science and Technology Museum exhibition spaces is determined by:

- The presentation of the sciences.
- The presentation of their history and evolution during the centuries, mainly from the 19th century to today with references to the ancient Greek period.
- The presentation of the relationship between the sciences, between the technologies, as well as between sciences and technologies.
- The division and the relationship between the group of exact sciences, the group of applied sciences (technology and health sciences) and the group of humanities.
- The facility for groups to visit.
- The facility to organise educational activities for schools, students, etc.

The new museum building will cover a surface of 3 500 m^2, which will be extendable. It will be placed in the centre of the university campus, just in front of the new conference and cultural centre which hosts an important number of conferences, seminars and cultural events. Beside it will be the university café-restaurant which is visited not only by the university students and staff, but also by school parties and people from the community, and which organises many social events for different groups. This position on the university campus confirms the role that the museum can play within the university and the local

community. It can be a place of activity and also an important link between the university on the one side and the town and the region on the other.

In July 1998, expressions of interest for designing the museum building were invited from agencies or partnerships. The assessment of design submissions received was based on the standards set out in the building and museological programme, the integration with the environment, and cost. In June 1999, the selection committee awarded the first prize for the best conception of the museum to the partnership of Ioannis Vedourakis (architect), OMETE Ltd, Constantinos Cotsogiannis, Helen Katsadoraki, and G. Karavokiris and associates. The group finished the implementation building project in April 2000 in collaboration with the technical service of the university. In early summer 2000 the university started selecting the construction agency which will build the museum. This selection process will finish before the end of winter 2000 when we hope that the construction of the museum building will begin.

We will then start working on the final implementation of the museological programme in collaboration with the university departments. For the design of the museum's permanent exhibition we are going to consider the requirements of different kinds of public. The design will be ready as soon as the building is completed. The final museological plan and the form of the exhibitions will depend on the number of departments that will agree to collaborate on the project and the content of the relevant collections at the time of opening.

The collection documentation and evaluation of the scientific and technological heritage

Many university departments, sections or laboratories hold different collections of old equipment used in them, material collected in the field for research and education purposes or other kind of collections, such as those of the Department of Education, the Department of Physics and the Department of Electrical Engineering and Computer Technology. For that reason we decided to first identify all the existing collections or objects, as well as all other material (books, cards, photos, etc.) in the university campus and then start collecting them all in a unique place, in order to record, document and evaluate them. For that reason the collaboration of the university departments was considered very important and the rector officially asked them each to dedicate a co-ordinator for the Science and Technology Museum.

The co-ordinators' collaboration with the museum will involve a number of duties. They must identify the extent of existing material or collections in their departments suitable for the museum, and suggest different ways for enriching these collections with other material that has to be found outside of the university. They must advise on or organise the registration and documentation of the collections by using staff, student or volunteer groups. They must assist in the development of the museum's documentation and collection policy. They must support the museological design of the exhibitions and the development of the philosophy of the presentation of each science. Finally, they must develop the levels of collaboration between their departments and the museum.

The university has provisionally set aside a building in which to house the collections and their documentation. This building was renovated to provide suitable facilities, office space and equipment.

Existing documentation procedures and data standards developed by organisations such as CIDOC/ICOM (Documentation Committee of the International Council of Museums) as well as the classification systems used have been evaluated in order to devise the final documentation procedure and the data standards of the museum. The collection, documentation and evaluation procedure started early in the academic year 2000-2001. The content of collections will depend on the number of sciences represented and the variety of the traces available of the history and evolution of each science. This will, of course, influence the museological implementation plan and the final form of the exhibitions.

The creation of the museum's legal status, function and co-operative relationships

Documents concerning the structure and enactment of other relevant institutions in Greece or elsewhere are being searched, studied and evaluated in order to develop the museum's structure, functioning plan and working plan. The final structure of the museum is not very clear for the moment, but a board of university professors and a director will lead the museum. We hope that the museum will at least have a collection department, a documentation department, an exhibitions department, and a department for educational programmes and other activities, in order to be able to fulfil its dual role, the academic and the public one. It has been suggested to the university that four different categories of staff are needed for the museum: specialists to run the activities in

collaboration with the university departments; administrative personnel to handle all administrative matters; support personnel (*e.g.* cloakroom, information desk); and security staff. The museum intends to attract as many different audiences as possible from the academic community and the local community, and involve them, as much as possible, at all levels of its organisation and work.

The museum's plans for fulfilling its academic role include:

- Supporting the departments' fieldwork by providing staff and material, and housing the collections made.

- Organising fieldwork to enrich the collections in collaboration with the university departments by involving the staff and the students.

- Organising seminars for students or other volunteers who wish to support the collection, documentation and educational activities of the museum, and the management of their contributions.

- Supporting the departments' courses on the history of sciences and the teaching of specific fields of study.

- Involving the departments' staff and students in the organisation of the exhibitions and other museum activities.

- Engaging in academic discourses and introducing students to a sophisticated intellectual dialogue through the organisation of exhibitions and other activities.

- Collaborating with the departments on the development of products on the history of sciences and technology, or other interesting topics on science and technology based on new technologies, to support exhibitions and educational activities.

The new museum building is going to be very attractive in itself as it is going to be the most interesting building in the area. At the same time we plan to organise the exhibitions and all the other activities in a very attractive way and open them to the public. Because of its special nature a university museum is

expected to serve the biggest variety of communities as it can be intimately connected with the education of students of all levels over extended periods of time.

The museum's plans for fulfilling its public role include:

- Involving as many local people as possible (*e.g.* specialists of different sciences or technology, school teachers) or local corporate bodies (*e.g.* associations of people belonging in different sciences, professional networks, institutions, industries) in the enrichment of the collections. This will involve the donation of objects or other material and the registration of information indicating the local traces of the history of sciences.

- Organising special events, exhibitions and the like on science and technology. The museum will use and combine the skills and knowledge of academics, through the results of their research, their publications and other university activities, to make them understandable and accessible to different kinds of publics, inside and outside the university.

- Developing contacts with all concerned educational bodies (the Department of Education, the Ministry of Education, the National Institute of Education, local authorities responsible for primary and secondary education, the environmental education authorities, etc.) in order to better develop and disseminate the museum's future educational activities.

- Organising special areas in the museum for children's atelier and educational programmes to encourage children to have better contacts with science and technology.

- Organising activities for adults (*e.g.* exhibitions, lectures) which will constitute an important educational instrument that may guide them to support the preservation of our heritage, and to respect the physical and cultural environment and artistic or intellectual creation.

- Organising courses on the history of sciences as well as on the practicalities of science and technology. The museum is expected to maintain a close relationship with the latest achievements and discoveries in science and technology, as well as the research activities of the university, and use them to attract people into the unfamiliar territory of the university campus.

Conclusion

The process of preparing and organising Patras University Science and Technology Museum is going to be a long one as all the activities presented above need not only much time and work but also a lot of support from the academic and the local community in order to be accomplished.

The fulfilment of the museum's dual role has been a core goal since the beginning of the preparations and it will continue as such once the new museum building and the permanent exhibition have been completed, and the museum is fully operational. By fulfilling its dual role Patras University Science and Technology Museum intends to become the connection point for the university. It will bring together the members of the academic community and bring the local community closer to the university.

REFERENCES

STANBURY, P. (2000), "University museums and collections", *Museum International*, Vol. 206, No. 2, pp. 5-9.

THEOLOGI-GOUTI, P. (2000), "A new museum for an ancient land: Patras University Science and Technology Museum", *Museum International*, Vol. 206, No. 2, pp. 25-27.

4.5. A NEW MUSEUM OF ELECTRICAL TECHNOLOGY IN PAVIA: A PUBLIC MUSEUM IN A UNIVERSITY CAMPUS

by
Antonio Savini,[1] Italy

Abstract

To mark the bicentenary of the invention of the electric battery by Alessandro Volta, the University of Pavia has decided to pay a permanent tribute to its illustrious master by instituting a new museum of electrical technology illustrating the major steps in electrical evolution. This will add to the existing university collections of electrical science and provide a suitable home for the significant collection of old industrial equipment and documents relating to electrical technology. The founding institutions of the museum, with the University of Pavia, are regional and local authorities. Electrical companies have already contributed to the collections and expect to further enrich them. A foundation composed of all these parties will manage the museum. The museum will be located on the university's scientific campus but will be open to the general public. It is designed to complement similar existing institutions in Europe and will exhibit both the historic and the contemporary.

Introduction: Two centuries of electrical technology in a new museum

Alessandro Volta, the inventor of the electric battery in 1799 served for many years as professor and rector of the University of Pavia. The invention of the electric battery created immediate worldwide interest, marking the dawn of a

1. The generous help of Faith Bowers for the linguistic revision of the manuscript is gratefully acknowledged.

new technological age. It was now possible to perform scientific experiments using electric current and the invention initiated the impressive development of electrical technology which continues to progress today.

The silent movement of electric charges within conductors, and the invisible presence of electromagnetic waves all around us, influence and control nearly all the processes which characterise the present post-industrial society in this information age, from the production and utilisation of energy and goods to services, communications and entertainment. Today's global village cannot exist without electricity, a vital force for everyday life. People rarely recognise this, yet their lives are permeated by electricity. To mark the bicentenary of the invention of the electric battery, the University of Pavia has decided to pay a permanent tribute to its illustrious master by building a new museum of electrical technology. This will collect representative material illustrating the progress of electrical technology from Volta to the present day and beyond.

This is a university museum and will be used for teaching within the university. It will promote research through the Research Centre for the History of Electrical Technology which is already established. At the same time, the museum will be open to other visitors. The specialist, the student and the general public will move through displays which show the origins of the various applications of electricity and how they were subsequently improved, and will see the development of generators, motors, instruments and devices, appliances, telegraphs, radio receivers, etc. They will also see how this technological evolution relates to the evolution of science, economics and society.

Building the museum

The founding bodies of the museum, with the University of Pavia, are the Lombardy Region, the Town of Pavia and the Province of Pavia. A formal agreement between these was reached in 1999, committing them to establish the museum by the year 2002.

The collections upon which the museum will be based will include the existing collections of the University of Pavia, composed of old industrial equipment acquired since the mid-1980s. Electrical companies have already contributed to the collections. In particular, ENEL, the Italian Electricity Board, has offered to loan all the objects from its own Museum of Electric Energy, formerly based in Rome.

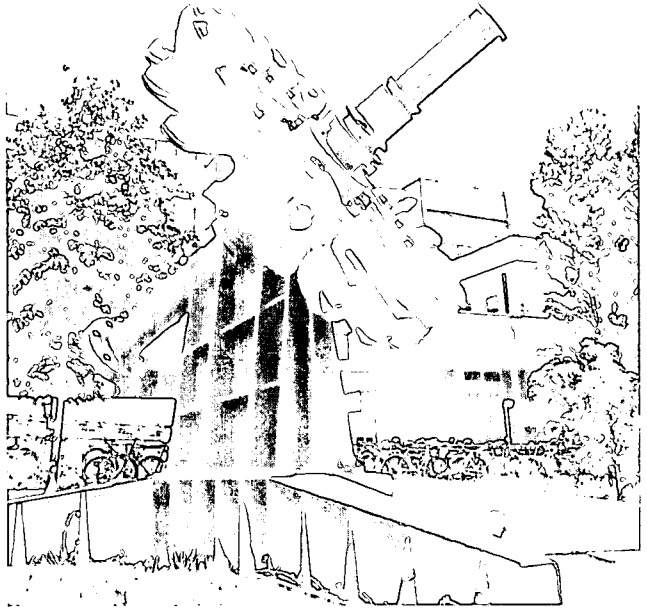
The new museum, which will cover some 5 000 square metres in the university campus, will belong to the university. However, having public institutions among its founding members, it will be open to the general public. These members are contributing to the cost of building the museum and will contribute even more to its subsequent management.

Although local institutions support the enterprise, this does not mean that the new museum will be of only local interest. In the age of globalisation that would be a nonsense. The new museum is created with the approval of the National Museum for Science and Technology in Milan and will be comparable, in the field of electrical technology, with the major technological museums of Europe.

The scientific standing and the international dimension of the new museum are guaranteed by a steering committee which includes specialists from prestigious museums and institutions throughout the world. They will assist the designers in the difficult task of presenting the evolution of electrical technology neither as a linear progress always leading directly to the best results nor as an isolated process but set in the social and economic context.

Why build a new technological museum?

In the past few decades the rate of change of electrical technology has been more impressive than ever. Automation, miniaturisation, integration, and distance communication are just a few of the factors which have completely changed the products of technology. The process has not ended. In some fields, for example, computers, development is so rapid that products become obsolete within a few years. Industries, busy updating their production and matching market needs, have little time to keep accurate documentation of their history. Only non-profit organisations, like universities, will save and study the traces of the past; public institutions, moreover, may undertake to educate people to think of the heritage of the past and admire the wonders of the present. Such bodies may, therefore, initiate science museums and science centres.



An ancient hydraulic wheel located outdoors (Museum of Electrical Technology, University of Pavia)

Source: University of Pavia.

The new Museum of Electrical Technology in Pavia is established with the following objectives:

- To save, restore and keep products of electrical technology, showing its evolution from the origins of electrical industry and applications up to the present time.
- To illustrate, by means of the saved heritage, key moments in the history of electric power and communications.
- To assure continuous study and research on the origin and development of electrical technology.

- To develop educational activities and disseminate technical culture.

- To promote tourism among school children and the public at large, helping them to become conscious of the history of the science, technology, economics and culture of their own region in a national and international context.

The new museum will have visitors of various ages and cultures. The specialist will find evidence and ideas for his/her studies in the documents displayed or stored; the young, on the other hand, will find something which, unfortunately, schools generally do not offer, a "hands on" and live presentation of science and technology. The general public will find, besides curiosity and perhaps fun, stimulation to think about the way everyday life is permeated by science and technology.

A new museum must be based on modern criteria of scientific museology. It will therefore show both the old and the new. In addition to permanent exhibition halls, there will be a gallery for temporary exhibitions to show innovation, a large store, a good library, and general services. Original artefacts and replicas will be accompanied by simulations, films and other multimedia presentations.

Managing the museum

No less important than the building is the managing of the museum once built. The founders of this museum are well aware of this. The key problem is to determine what kind of organisational structure the museum should have if it is conceived to be not merely as a collection of objects set up once and for ever but as a living body with intense activity.

A university museum managed directly by the university is likely to encounter problems. Could the university alone ensure the range of activities needed for the museum to survive? These would include being open to the general public every day, adding to collections, running a conservation laboratory to restore objects, and marketing. Only an autonomous body could implement all the activities needed, with its own budget and regulations defined according to the International Council of Museums (ICOM) requirements. Besides, other bodies have an interest in the museum's activities: local public institutions because of

the likely impact on employment and tourism; donors (industries, companies, private individuals) because of the expected follow-up of their donations; and citizens in general, wishing to offer their experience as experts, collectors or craftsmen.

On the basis of these considerations, we are investigating how to set up an autonomous body to manage the museum. Italian law permits the creation of "Fondazioni di partecipazione" (Foundations of participants), special public companies or trusts, combining the characteristics of associations and foundations. Within such foundations the private and the public co-operate on strict lines: the private is fully involved in all steps from decision making to action, while public control is also ensured.

Moreover, we believe that a way should be found to enable citizens to participate in the life of the museum as much as possible. University students and volunteers could serve as attendants to watch over the collections. Retired craftsmen could help teach the art of restoration of instruments and other artefacts. The Society of Friends of the Museum will be asked to contribute to the museum's activities.

Another aspect is constantly under consideration. As far as possible the museum must establish and maintain links with the museum sector: first, with the existing university museums in Pavia which would share the same organisational structure and then with the network of museums of science and technology in Europe. To achieve this it must adopt similar methods of classification, presentation and exchange of information.

Conclusions

Nowadays to create a new museum is a challenge. On the one hand, the number of people participating in cultural events and visiting museums is increasing. Public institutions seem to have a renewed wish to invest in events and enterprises, including museums, which are devoted to diffusing culture and safeguarding local traditions.

On the other hand, the original purpose of museums, to educate people by reconstructing the past, nowadays faces the competition of television which offers many advantages over museums, being less expensive, more accessible, flexible, etc. Of course, true three-dimensional objects displayed in a museum

are far more interesting than virtual objects shown on a television screen. But the word "museum" itself sounds somewhat old-fashioned, and in the age of virtual reality what is the meaning of a true museum?

Museums that wish to meet people's expectations and, in a word, to survive, must change from the 19th century model. Once places where one saw wonderful objects in a silent, isolated environment, they should now become places where it is possible not only to visit exhibitions but also to study, keep and store documents, watch films, listen to music, eat, meet people, etc.

Universities, especially ancient universities, are full of collections of objects carefully stored and documented. In most cases, these treasures are known only by specialist scholars and, perhaps, by some students. Society should be grateful to the universities for taking responsibility for the important task of creating new museums or keeping and enlarging existing ones. Now, however, universities need the help of public institutions and private citizens in setting up and managing museums. The mission is basically the same as ever: to show the past in order to help people to understand the present and to decide about the future.

REFERENCES

LUMLEY, R. (1998), *The Museum Time Machine*, Routledge, London/New York.

International Council of Museums, *Statute*, ICOM, Maison de l'UNESCO, Paris.

4.6. NEW HORIZONS FOR THE CRAFTS STUDY CENTRE COLLECTION AND ARCHIVE

by

Barley Roscoe, England

Abstract

Over the past 20 years the Crafts Study Centre and Archive has obtained an international reputation as a unique archive and collection of 20th century British crafts embracing ceramics, textiles, wood and the largest collection of modern calligraphy outside London. First opening to the public in 1977 within the Holburne Museum, University of Bath, the crafts were exhibited juxtaposed with the art collections of Sir William Holburne. Latterly with restricted possibilities for expansion within the museum and limited opportunities to forge academic links with the university, trustees concluded that a new home should be sought for the centre. Following an extensive search the Surrey Institute of Art and Design, University College, Farnham was identified as an ideal partner. The move was effected in April 2000. This partnership will support both organisations' core aims in fostering excellence in the teaching, research and development of modern crafts, but overall it facilitates wider public and academic access of an invaluable resource.

Introduction

Over the past 20 years the Crafts Study Centre Collection and Archive (CSCCA) has obtained an international reputation as a unique archive and collection of 20th century British crafts embracing ceramics, textiles, calligraphy and wood together with reference books, documents, photographs and craftspeople's working notes. The CSCCA first opened to the public in 1977 within the Holburne Museum, University of Bath, which displays the fine and decorative art collections of Sir William Holburne (1793-1874). In April 2000

the CSCCA relocated to the Surrey Institute of Art and Design, University College, Farnham.

Origins of the CSCCA

Originally the CSCCA was founded to develop understanding of the lives and work of artist-craftspeople from the 20th century onwards and to encourage fine craftsmanship. The intention was to make available as wide a variety of materials as possible for such studies so that makers, critics, scholars, researchers and enthusiasts could look at the roots of contemporary work in the crafts. The concept had originated from a determined group of craftspeople and educationists in the 1960s who felt that the best craftsmanship of this century needed to be preserved, and that unless a centre was created where a permanent collection and archive could be housed, much of the work of the first half of the 20th century was in real danger of being dispersed and lost. To this end the Crafts Study Centre Trust was established in 1970. Funds were obtained to appoint a part-time research assistant to list and catalogue the work promised. Meanwhile the trustees made approaches to the Holburne Museum and the University of Bath as to the possibility of housing the CSCCA collections there.

CSCCA within the Holburne Museum of Art

The Holburne Museum is an imposing Georgian building standing in its own grounds five minutes from the centre of Bath. First built as the Sydney Hotel it had been acquired by the Trustees of the Holburne in 1913 and converted to house the Museum Collections by Sir Reginald Blomfield. Links between the Holburne and the University of Bath had been forged in the late 1960s. The Holburne Trustees together with the university welcomed the idea of embracing the CSCCA and allocated half the ground floor of the museum to the centre. In 1976 this space was skilfully converted by Neville Ward to form a permanent exhibition area, study room/office and store, and the collections went on public display the following year. High ceilings, neutral colours and natural wood fittings all helped to create a spacious and uncluttered effect. Nearly 20 years later, in 1994, further space on the first floor of the Holburne was converted to provide an archive study room and library in memory of Robin and Heather Tanner, two founders of the CSCCA.

Background to the new partnership

Subsequently, the move of the CSCCA to the Surrey Institute of Art and Design, University College developed from a recommendation made during a study conducted for the Holburne Museum and Crafts Study Centre by Bonnar Keenlyside Consultants. Thanks to a grant from the Arts Council of England in 1997 they had originally been appointed to explore the feasibility of building a purpose built extension to the Holburne Museum to accommodate the CSCCA and provide improved joint facilities. However, having concluded that this was not a viable option Bonnar Keenlyside went on to recommend that the CSCCA should seek another partner. The two bodies of trustees recognised that this would be in the interests of both parties as not only would this release much needed space within the existing building for further displays of the Holburne's collections, but also allow the Study Centre to expand and develop its potential to the full.

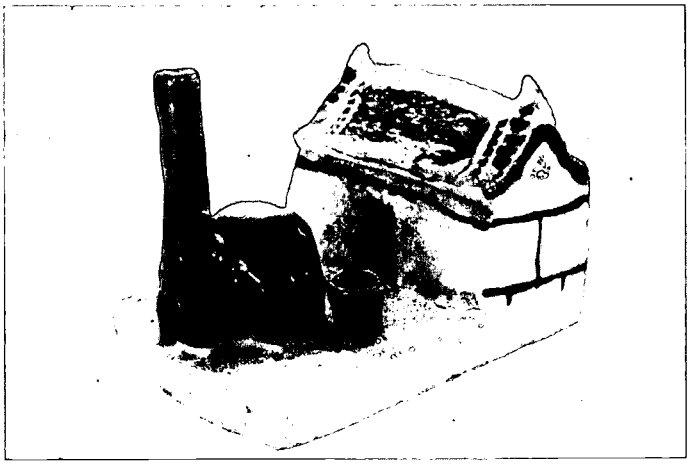
In seeking a new home trustees felt it of paramount importance that the prime objectives of the CSCCA should be key to the new partnership and facilitated by it. These objectives are to promote research into the lives and work of artist-craftspeople and encourage fine workmanship. They can be achieved by developing the collection and archive, making it accessible to the widest possible audience; initiating research projects using the collection as a basis for study; implementing projects and short courses; publishing monographs, reports, catalogues and making a significant contribution to the history of the crafts; and promoting the use of the collection as an integral part of contemporary craftspeople's practise. With these in mind possibilities for consideration were listed, while editorials in *Crafts* magazine and *The Museums Journal* stimulated a good response. A short list was drawn up, offers invited and exploratory visits made. The field was narrowed and, after much discussion and deliberation including further follow up visits, trustees agreed that a partnership with the Surrey Institute would be in the very best interests of the CSCCA for the long-term future. Historically, many of the founder members of the Study Centre had close links with the institute, while today it is hard to imagine an educational establishment with more empathy for the CSCCA and what it represents.

The collection and archive

The majority of the CSCCA collection has been built up from donation or bequest and is strongest in work of the first half of the 20th century. However, contemporary work is acquired through gift and purchase, on the recommendation of the Acquisitions Committee which usually meets once a year.

The Bernard Leach collection provides an interesting example of how material has come to be held by the centre. Leach, one of the most influential figures in 20th century British studio pottery, gave the centre nearly one hundred of his pots spanning his career from some of his first early raku pieces made out in Japan to some of his last stoneware bottles made at the Leach Pottery, St Ives before he went blind. Shortly before his death in 1979 he gave nearly 70 pieces from his personal study collection of pots from Japan, Korea and China as well as examples of traditional English slipware. The collection is not only a source of inspiration in its own right, but of particular interest when viewed in the context of Leach's own work. Leach went on to bequeath all his papers to the collection - a wonderful wealth of material including letters, diaries, accounts, photographs and sketches. Several years later this bequest was supplemented by two further donations of archival material from his son, David, and personal secretary, Trudi Scott. This means the Leach archive now contains nearly 15 000 items. Thanks to grants from the Crafts Council and Monument Trust the archive has been catalogued and is an invaluable primary resource for scholars and, currently, Leach's biographer, Emmanuel Cooper, who has been working closely on the archive over the past two years.

Other important collections held by the CSCCA are the coveted Lucie Rie archive which complements a good representation of her ceramics; source material, woven lengths and samples from Ethel Mairet's Workshop; lengths, garments, samples, printing blocks and source materials for the hand block printed textiles of Phyllis Barron and Dorothy Larcher; and the most substantial body of 20th century calligraphy outside London. The CSCCA has maintained an energetic exhibition and events programme focusing on work by important figures in British crafts. Many of these have been initiated by the centre and have drawn on the permanent collection, while illustrated catalogues provide a lasting record of these exhibitions. In addition the Crafts Study Centre's Collection has been well used for research by students, craftspeople and the general public on a day-to-day basis.



Raku model of his workshop and kiln in Japan made by Bernard Leach in 1917 (p.75.68)
Source: CSCCA.

The Surrey Institute of Art and Design, Farnham

In seeking a new partner the trustees were very keen to ensure that any future collaboration should offer the opportunity to further develop and enhance the scope of the collections and the range of activities undertaken by the CSCCA to date. The CSCCA identified the Surrey Institute as a complementary partner who would help the CSCCA deliver its objectives and needs, while offering the support and expertise of a major centre of specialist study in which the crafts play a central role. Both organisations recognise the unique opportunity that now exists to work in partnership in support of both organisations' core aims, namely fostering excellence in the teaching, research and development of modern crafts. The move offers the potential for maximising the overall public benefit of this unique resource.

Vision for the future

The Surrey Institute's vision for the CSCCA has two principal elements. The first is to provide a base from which it can capitalise on and develop its present

collection by giving improved exhibition opportunities and better access for a greater number of people to the range of its holdings. This includes establishing a programme of events at the CSCCA's new base at least as extensive as the former CSCCA programme. In addition, there is the opportunity to complement and extend this in conjunction with a considerable range of other activities that the institute provides continuously as part of its core educational business. This includes open lectures, practical workshops and residential study.

The second element is the institute's belief that to further establish the CSCCA's reputation as a collection of national and international worth it is essential to network with other similar institutions at an appropriate level and for the centre to establish itself as an outgoing resource which will carry further afield the value of the craft approaches represented through its collection and archive. It is important that the new centre is not solely a physical location, which attracts people *inwards* but that as a dynamic enterprise it goes *outwards* to make links at national and international level. In particular the institute believes the CSCCA has much to offer in collaboration with other galleries and partners and in relation to interest groups in Europe, Japan and the USA. The institute is uniquely placed through existing links and partnerships to support and assist such development thus providing opportunities to foster partnerships at all levels, creating a broad network and thereby raising the profile of both the CSCCA and the institute.

Acquisitions

In terms of activity and operations the CSCCA will continue to develop the collections and archive into the 21st century through acquisition by donation, bequest and purchase. The existing system of engaging an acquisitions panel (separate from the Board) to adjudicate on collections development will be maintained. The CSCCA is fortunate to have developed a network of leading practitioners within their respective fields to assist with this. The CSCCA will present on public display a large representative selection from the collection featuring key works by leading figures together with a selection of work across the crafts. Display changes will be made at regular intervals to complement the temporary exhibitions mounted or special events and activities. To emphasise the close relationship and complementary nature of the archive to the collection, a limited selection of work from the archive will also be on view.

Exhibition

In addition to the display of work from the permanent collection, the CSCCA aims to manage the planning of at least one touring exhibition (biennially) of craft that ties in with CSCCA research and academic activities. Collaboration with an international partner will be sought if appropriate. In addition, the CSCCA will act as a host venue in alternate years for a relevant major craft-touring exhibition thus maintaining a reciprocal relationship with other venues. These exhibitions will be linked to the work of the CSCCA and/or the institute but not restricted to aspects of the CSCCA collection. It is planned to form a CSCCA Exhibitions Committee to assist with planning and developing the exhibition programme. It is hoped that the CSCCA exhibition space will forge a mutual synergy with the James Hockey Gallery and the Foyer Gallery which already offer an energetic programme for the institute.

Research

The CSCCA's research policy underpins the overarching aim of the Faculty of Design to develop a research profile strategically related to the development of the history of the crafts from 1900 onwards and in support of its claims for excellence. The CSCCA will expand its role as a major resource to the professional and academic community through improved facilities and improved access. Direct research activity, undertaken by the CSCCA on a project to project basis, will be supported by the appointment of research studentship, within the institute's evolving research degree provision. Research projects initiated by the CSCCA will look to have both a published monograph and a touring exhibition with accompanying catalogue and hand list as specific outcomes.

Teaching and learning

The CSCCA will promote the use of the collection and temporary exhibitions as a lifelong learning resource. Working with the institute's marketing and course development departments, the CSCCA will seek to maximise use of the collection and archives in the learning environment to embrace a broad audience both at home and abroad from the general public to the specialist. The CSCCA's appeal looks to extend well beyond an undergraduate/graduate base, although within the institute its student use should include regional part-time

students, distance learners, third age students, pre-degree students, adult returnees, short term trainees and full time students. Lectures, workshops, short courses, summer schools and conferences all seek not only to consolidate the research, publication and exhibition work undertaken by the CSCCA but develop further potential audiences and provide opportunities for partnership and collaboration. The annual publication of a journal for the CSCCA will be considered to encourage and inform a growing network of support.

Building and digitisation

The institute is committed to building dedicated space for the centre and it is anticipated that this should be ready within the next two to three years. Meanwhile the collections are accommodated in accessible storage in Farnham and Barley Roscoe has been appointed as the CSCCA Co-ordinator concentrating on working on plans for the new gallery, digitisation of the collection, and the forthcoming programme of exhibitions and events. Digitisation of the collection, together with a significant proportion of textual items from part of the archive, is key to managing the documentation of its collections and archive efficiently, enabling the CSCCA to raise its profile by making itself accessible worldwide.

Already the CSCCA has benefited from its new partnership with the institute having heard in May 2000 that an award of GBP 270 000 has been made to the institute through the Joint Information Systems Committee (JISC) of the British Higher Education Funding Councils. The award, made as part of JISC's funding allocation aimed at converging new learning environments with digital library developments, will enable the institute to digitise the artefacts held within the collection and archive of the Crafts Study Centre, as well as within its own textile collection. The CSCCA submitted a joint bid along with the institute's Faculty of Design and the Visual Arts Data Service (VADS), also based within the campus. As one of 37 successful bids out of a total of 137 received, the CSCCA is now in a position to proceed with its plans to produce a digital resource that will include some 3 000 images and 1 000 documents from the collection and archive. Students and others will be able to view items from within the digital catalogue over the Internet and proposals for integrating the digitised collection into teaching and learning materials will be able to be implemented, taking further advantage of the resource. In addition, GBP 76 000 of the funding received will be used to digitise the institute's own textile collection, which has been built up over the last 40 years in support of the BA

(Honours) programme in Textiles. The resource will complement the digitised collection of the CSCCA and together they will have value as an educational resource and as a basis for new research.

Conclusion

It is most encouraging to have such positive evidence of the mutual benefits of the partnership between the CSCCA and the institute from its inception. With such support the centre is well placed to develop and flourish as a vital element within the institute and together look forward to a bright future ahead.

CONCLUSIONS

by

Melanie Kelly, England

In bringing together these papers the purpose is not only to provide a record of a successful IMHE seminar, but to also raise awareness about university museums, their contribution to research, their public role, and the value of the collections for which they are responsible. As has been shown, a university museum can be effectively used to disseminate knowledge, stimulate understanding, protect heritage, promote higher learning and enhance the life of the community.

Participants at Paris came from institutions with different structures and funding assumptions, but nonetheless they found common areas of concern to discuss. The papers included here highlight some of the challenges they face: the physical shortcomings of existing buildings, the fragility of specimens, the lack of money and staff, the problems of fundraising, the shifting focus of academic priorities, the sense of isolation. These pressures upon the university museum, along with the expectations of what it can deliver, inform its managerial, financial, curatorial and organisational outlook.

In their debates participants kept returning to the issue of the university museum's role as both a focus for high level scholarship centred upon its collections and as an accessible place for the wider community. All museums can be places of both study and enjoyment, but it was thought that the university museum has to successfully serve the biggest range of audiences, and, crucially, has to do so with less funding opportunities than other museums. More is demanded than the available resources can reasonably provide. It should also be borne in mind that alongside a perceived inequitable distribution of funding between different aspects of higher education provision (with the sports facilities and the computing departments seen as getting the lion's share of allocations), there is concern over under-funding across the board.

Originally it had been thought that this seminar with its emphasis on "management" would complement other gatherings of university museum staff which have concentrated on more curatorial issues. The IMHE Programme

seeks to disseminate new ideas about the practice of institutional management in higher education, ranging from policy-making to management systems and governance, in the context of changing education policy. The management of university museums would appear an apt topic for such an initiative. However, within the constraints of the seminar timetable no issue of concern to university museums was ruled out. From the discussions in Paris it was clear that for some participants "management" is still defined in terms of the administrative and technical activities associated with caring for collections rather than with activities associated with running a business venture. They wished to speak of the history of their collections, their contents, the problems they face in fulfilling their curatorial duties. If a more business-oriented approach is the way forward - and that, in itself, is open to debate - then those working in university museums do not appear to be moving at a uniform rate.

Those least inclined to adopt business techniques seem also to be less keen to move towards developing the more public aspect of the university museum's dual role. For some, having a business plan and increasing public access is an irrelevance because of the small scale of their operations. If, for example, a museum has only one full-time employee who is at one and the same time curator, secretary, researcher, field worker, laboratory technician, tour guide and educator, how can that person also be expected to devise a strategy, write a plan, market the museum and fundraise? In addition, whilst business language and the art of self promotion may be seen by some as a breath of fresh air in the dusty world of the traditional museum, for others, they are a brash and inappropriate intrusion.

Some fear that in order to increase public interest and increase funding they will be expected to sublimate the innovative, the risky and the aspirational in favour of the entertaining and the populist. If a university museum no longer supports a high level of research activity, it is questionable whether it can still retain its distinct identity as a place of scholarship that others working in the museum sector seem to envy. To some, this distinctiveness is in itself a unique selling point and university museums could face greater adversity if this were to be lost. This debate is typical of many taking place in the wider context of both the higher education and museum sectors, where there is intense public scrutiny regarding funding and access. There is some concern amongst those working in these sectors that high standards and the pursuit of excellence will be compromised because of a need to be more inclusive. As all museums have a duty to make their collections available for use, it is perhaps questionable whether there is any value in trying to stand aloof from the demands of

satisfying the public. Reassuringly for those resisting the push towards the more public role, there is evidence that people still expect greater levels of accuracy and more reliable information from a university museum. Despite modifying its presentation style and increasing the entertainment factor, the university museum should be able to remain true to its scholarly identity and its academic objectivity. A commitment to excellence should still be a laudable aim and justifiable under funding criteria. Expanding audiences may expand the workload, but one important lesson to be drawn from the Paris seminar is that where business techniques have been used, they have helped the university museum make such changes. And through managing change, rather than submitting to or resisting it, the university museum can become stronger.

As is often the case with such events, although there was no restriction on who might attend the Paris seminar, it was unlikely that anyone who did not already have an interest in the field would have felt the need to go. One speaker remarked that the people who should really have been there were those who did not share the delegates' enthusiasm for university museums. Useful though it was to discuss issues in a sympathetic group, it would possibly have been of even greater value to have addressed an audience of the as yet unconverted. It would, indeed, be beneficial if a wider spectrum of people could be gathered together on some future occasion. Many of the assumptions that seem to prevail amongst those directly involved with university museums could perhaps be put to the test. Is it true, for example, that senior university administrators find it hard to make the conceptual leaps needed to take advantage of opportunities for change? Are universities naturally reluctant to take risks? Is this the inevitable consequence of their receiving funding from the public purse? Do university administrators really need to be convinced about the advantages of investing in their museums? Do academics see museums as rivals for funding? Or are they allies in trying to find ways to preserve integral scholarly values at a time when the cultural environment in which they work is changing? And what of the general museum sector? Is it so very different to that of the university museum?

To physically bring together such a gathering may be overly ambitious and perhaps the best way forward to widen debate is by means of disseminating this publication, encouraging comment and effecting a dialogue amongst all those who have a stake in the future of university museums. The issues are complex and it may take time to find a common language and level of understanding, but if university museums are to have a future it seems clear that isolation is no longer an option.

With regard, finally, to ideas for future activities in the field, many issues are well worth following up. In a medium term perspective it would be interesting to see, for example, how the new projects described in section 4 have fared and what lessons can be learnt from their successes or set backs. From these examples it would be of value to look again at whether university museums and their collections can be more effectively managed if those responsible for them become new style managers familiar with the techniques of running a business.

OECD PUBLICATIONS, 2, rue André-Pascal, 75775 PARIS CEDEX 16
PRINTED IN FRANCE
(89 2001 05 1 P) ISBN 92-64-19524-6 – No. 52081 2001

Managing University Museums

This publication focuses on the role of university museums, their organisation, management, governance and finance. Most university museum collections have been assembled for the purposes of teaching and research rather than for public display. Whether small, of local importance or large, with great public appeal, they are all defined by their relationship to their university and form a distinctive sector in the museum community.

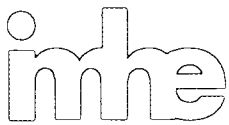
The papers gathered in this book take this distinctiveness into consideration. They examine the common issues and problems that university museums are facing, among which the most important ones are funding and collection management. Many examples of good and imaginative practice are presented as regards fundraising, widening public access, integrating information resources, marketing, management and international collaboration.

The book has been edited by Melanie Kelly, administrator at the International Center for Higher Education, School of Management, University of Bath.

www.oecd.org

OECD

ISBN 92-64-19524-6
89 2001 05 1 P



U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

Reproduction Basis

☑ This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

☐ This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").

EFF-089 (3/2000)